WATER – OUR MISSION FOR 75 YEARS

Santa Clara Valley
Water District

Final Water Utility Enterprise Report

August 2004

Santa Clara Valley
Water District

5750 ALMADEN EXPWY
SAN JOSE, CA 95118-3686
TELEPHONE (408) 265-2600
FACIMILE (408) 266-0271
www.valleywater.org
AN EQUAL OPPORTUNITY EMPLOYER

August 1, 2004

Dear Board Members:

The *Water Utility Enterprise Report, Final August 2004* presents the financial and water supply information that forms the basis for the adopted water rates for fiscal year 2004–05. This report documents the rates adopted for fiscal year 2004–05 and updates information provided in the preliminary report, which was filed in April, as required by the Santa Clara Valley Water District Act.

The Water Utility's adopted rates for 2004–05 are necessary to fully support the Board's Ends Policies on water supply and quality. The majority of the capital outlays in the coming years are committed to improving drinking water quality by converting the primary disinfectant being used at the District's three treatment plants to ozone. This stage of water treatment plant work is underway, and the need for capital is greater than ever. Staff has instituted a financial plan that maximizes the use of available reserves and relies on commercial paper to minimize both the amount of borrowed funds and the interest paid.

Plans for the coming year have already been affected by the State budget shortfall. We have already been hit with higher State fees for water rights and for dam safety inspections. Over $8 million in property taxes remain at risk to capture by the State to help solve the State's fiscal crisis.

The rates adopted for 2004–05 will support the operating and capital budget for the Water Utility. As anticipated in last year's rate study, the 2004–05 North County Municipal and Industrial rate for groundwater was increased by 8.0% from $375 per acre-foot to $405 per acre-foot. To hold to this rate, which was anticipated in last year's report, staff postponed some capital projects, curtailed selected operations, and maximized the use of reserves to reduce borrowing. The corresponding rate for agricultural water in North County was adopted to be $40.50 per acre-foot. In South County, the Board adopted rates higher than anticipated last year, because costs currently exceed revenues and such shortfalls are projected to continue for the next several years. The South County Municipal and Industrial rate was increased by 25% from $160 per acre-foot to $200 per acre-foot. The corresponding rate for agricultural water in South County was adopted to be $20 per acre-foot.

The adopted increases in South County are not the result of past and planned expenditures for the District's perchlorate response program. These costs are being tracked apart from South County finances in the expectation that the District will be reimbursed in the future by the responsible party(ies).

The attached report includes historical data on District water supply and demand and describes the benefits of the District's activities that underlie the need for the adopted groundwater charges. The final section discusses the revenue requirements for the upcoming fiscal year and provides financial projections for the next 10 years. The 10-year projections include operating

over

needs and capital investments that are planned to maintain the reliability and quality of water provided by the District. Staff are evaluating numerous potential investments in water recycling, water banking, and infrastructure reliability. The projected costs that could result from these studies are not included in the 10-year projections because of the high degree of uncertainty regarding the District's role and its share of future costs. Moreover, in some cases, there is no clear demand among our customers for the District to invest in these ventures.

Sincerely,

Stanley M Williams

Stanley M. Williams
Chief Executive Officer

Final **August 2004**

Santa Clara Valley Water District

Water Utility Enterprise Report

John Ryan
Special Programs Administrator

Darin Taylor
Senior Project Manager

Linda Louie
Assistant Engineer

Under the Direction of
Walt Wadlow
Chief Operating Officer
Water Utility

District Board of Directors

Joe Judge, Chair – District 2
Richard P. Santos, Vice Chair – District 3
Rosemary C. Kamei – District 1
Larry Wilson – District 4
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Tony Estremera – At Large
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Preface

This is the 33rd annual report on the status of the Santa Clara Valley Water District's (District) Water Utility Enterprise. In accordance with Section 26.5 of the District Act, the District annually prepares a written report on its activities to protect and augment its water supplies. As required by the District Act, this report provides information on the present and future water requirements of Santa Clara County (County), the water supply available to the District, future capital improvement and maintenance and operating requirements, financing methods, and the water charges by zone for agricultural water and nonagricultural water.

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I. ADOPTED WATER RATES AND SUMMARY

INTRODUCTION

The mission of the Santa Clara Valley Water District (District) is a healthy, safe and enhanced quality of living in Santa Clara County through watershed stewardship and comprehensive management of water resources in a practical, cost-effective and environmentally sensitive manner. The District's core businesses include flood protection and stream stewardship as part of its watershed operations, and water supply under the Water Utility Enterprise. The Water Utility Enterprise provides a safe and reliable water supply to the County's 1.7 million residents. The District's Water Utility budget and rate strategies for fiscal year (FY) 2004–05 are designed to provide revenues to pay the full cost of the District's operating and capital program.

Table 1-1 shows the water rates in fiscal years 2001–02, 2002–03 and 2003–04. The final column contains the adopted rates for FY 2004–05, which are in accordance with the pricing policy exhibited in Appendix B.

TABLE 1-1
Summary of Water Charges

(Dollars Per Acre-Foot, $/AF)

	2001–02	2002–03	2003–04	Adopted 2004–05
Zone W-2 (North County)				
Basic User Charge	330.00	340.00	375.00	405.00
Treated Water Surcharge				
Contract	80.00	80.00	85.00	90.00
Noncontract*	20.00	20.00	45.00	50.00
Zone W-2 (North County)				
Total Treated Water Charge				
Contract	410.00	420.00	460.00	495.00
Noncontract*	350.00	360.00	420.00	455.00
Zone W-2 (North County)				
Groundwater Charge				
Municipal & Industrial	330.00	340.00	375.00	405.00
Agricultural	33.00	34.00	37.50	40.50
Net Agricultural (With Mobile Lab & INAAP Discounts)	31.50	31.50	33.00	34.50
Zone W-5 (South County)				
Groundwater Charge				
Municipal & Industrial	130.00	140.00	160.00	200.00
Agricultural	13.00	14.00	16.00	20.00
Net Agricultural (With Mobile Lab & INAAP Discounts)	11.50	11.50	11.50	14.00

Note: Treated water is provided only in Zone W-2; the total charge recommended for contract treated water is the sum of $405 plus $90 or $495 per AF. Non-contract water will be available only from the Rinconada Water Treatment Plant in FY 2004–05, but non-contract deliveries will likely be limited during future construction periods.

ADOPTED WATER RATES FOR FISCAL YEAR 2004–05

The District's major sources of revenue are from the imposition of charges on groundwater and from contracts for the sale of treated surface water produced by its three treatment plants. The District assesses the need for groundwater charges annually and prepares this report to describe the activities undertaken to provide a water supply, along with the associated capital, maintenance, and operating requirements in accordance with State law. The report also describes the financing methods and adopted water charges for zones of benefit established by the District Board of Directors.

During the last few years, the District has responded to several challenges in an effort to keep wholesale water rates affordable. This year's water rate study was no exception. First, the Bureau of Reclamation gave the District a revised schedule to renegotiate the Central Valley Project (CVP) imported water. This will add significant incremental cost to operations in FY 2004–05 and FY 2005–06. Second, cumulative costs in South County through FY 2003–04 exceed cumulative revenues. This imbalance between costs and revenues is projected to continue for the next few years despite the adopted increases in rates.

Finally, the District must deal with significant uncertainty regarding future revenues and costs caused by the State budget crisis and perchlorate contamination in the South County. The Water Utility is at risk of losing over $3 million per year from a further shift in 1% property taxes by the State. Also, the District has initiated an aggressive strategy to address the perchlorate contamination in South County and is working diligently to receive full cost recovery from Olin Corporation, or other responsible parties, but no responsible parties have yet agreed to reimbursement.

As shown in Table 1-1, the Board adopted a $405 per acre – foot (AF) groundwater charge for municipal and industrial (M&I) water in the North County for FY 2004–05. For South County, the Board adopted a $200 per AF groundwater charge for M&I water for FY 2004–05. As in recent years, the Board set the rates for agricultural water at 10 percent of the M&I rates for FY 2004–05. The water rate increases for FY 2004–05 are necessary to offset the increase in CVP imported costs, and to cover the year-to-year increase in operations costs.

The Board adopted staff recommendation to increase the surcharge on treated water delivered under the contracts with retail agencies to $90 per AF. The District has the discretion to make available treated water in excess of the retailers' basic contract amounts, so-called noncontract treated water, "… at such times and such prices as determined by the District." The availability of noncontract deliveries will be suspended when necessary to accommodate construction activities scheduled for Rinconada Water Treatment Plant (RWTP). The amount of the surcharge on noncontract water affects the retailers' decisions on whether to pump groundwater or purchase treated water. For FY 2004–05, the Board also adopted staff recommendation to increase the surcharge on noncontract water from RWTP to $50 per AF. The $5/AF increase in both the treated water surcharge and the non-contract surcharge is not expected to affect retailer decisions on use of treated or groundwater.

The Board approved discounts up to $6.00 per AF, for qualified agricultural users. The Mobile Lab discount was increased to $3.00 per AF. The discount available to eligible growers who participate in the In-field Nutrient Assessment Assistance Program (INAAP) was also increased to $3.00 per AF. Growers who have qualified for both programs would see their net rate increase from $11.50 to $14.00 per AF. See Section III for further details on the Mobile Lab program and INAAP.

North County Rate Issues & Analysis

The key challenge in North County is the impact of the revised schedule for CVP contract renewal which would add an incremental $6.2 million in FY 2004–05 and $9.4 million in FY 2005–06, resulting in rate impact of $25/AF and $38/AF, respectively. The incremental costs stem from the fact that the contract renewal will trigger a transition from lower “contract” rates to higher “cost of service” rates for imported water from the CVP.

Last year, the Board passed a motion stating its intent to adopt the rates projected at that time for FY2003–04, 2004–05, and FY 2005–06. In order to meet the intended North County rate intention for FY 2004–05 and be in a position to meet the rate intention for FY 2005–06, the District plans to do the following:

1) Cut operations costs. The District has finalized the FY 2004–05 budget. To offset increases in services, cuts were made to ensure that the overall operations budget fell within the projection made last year, with the exception of the incremental CVP imported water costs and some uncontrollable fees imposed by the State of California.

2) Delay major capital projects including Rinconada Stage 2 Water Treatment Improvement Projects and Lenihan Dam Outlet Modifications. Delaying these projects allows the District to delay issuing a revenue bond from FY 2004–05 to FY 2005–06. The impact of these delays will be higher overall project costs due to inflation. In the case of Rinconada Stage 2 Water Treatment Improvement Projects, the delayed schedule will still meet the Environmental Protection Agency’s (EPA) deadline for water quality regulatory compliance.

3) Maximize the use of commercial paper debt financing. By using commercial paper in FY 2004–05 and postponing the issuance of a long term revenue bond until FY 2005–06, the District can minimize its debt service. Commercial paper provides two key advantages over a revenue bond in today’s market. The first is very favorable short term interest rates and the second is the option to delay the payback of principal until a revenue bond is issued to “take out” or replace the commercial paper debt.

South County Rate Issues & Analysis

Over the past two years (FY 2002–03 and 2003–04), the District has significantly expanded its operational activities in South County in the areas of recycling, water conservation, asset management, security , and groundwater quality management, to name a few. To avoid rate shock in those years, the Board has chosen to increase rates less than required to bring revenues and costs into balance.

However, two new factors have emerged that caused staff to recommend rates for South County above the rate intention adopted by the Board in 2003. The first is the revised schedule for the CVP contract renewal which would add an incremental $0.6M and $0.9M of cost to South County in FY 2004–05 and FY 2005–06 respectively. These incremental costs result in a rate impact of $24/AF and $36/AF in each respective year. In addition, Staff has revised future CVP water allocation estimates to South County upward based on historical usage.

Second, since the cumulative shortfall in revenue is funded by the Water Utility reserves and is in effect a loan from the Water Utility reserves, the Water Retailers recommended that the District begin charging interest on the “loan.” Interest charges over the next 5 years are projected to total approximately $600,000.

Consequently, the Board adopted a $40/AF increase in the FY2004–05 M&I rate to $200/AF instead of the $180/AF projected last year. Staff analysis shows that despite the adopted 25% increase in rates for FY 2004–05, annual costs would exceed revenues for the next few years.

The adopted rates for South County do not include recovery of the District's perchlorate response program costs. The District is funding Perchlorate-related costs up front with funds "on loan" from the Water Utility reserves.

In 2003, the District initiated an aggressive strategy to restore the quality of groundwater supplies in South County affected by perchlorate contamination. District staff has formulated a perchlorate response program and has coordinated with its partners in the Perchlorate Working Group (Morgan Hill, Gilroy, Santa Clara County, Central Coast Regional Water Quality Control Board, the Perchlorate Community Advisory Group and legislators) to ensure clean up of the groundwater basin and provision of an alternative water supply for impacted residences. The District is planning to spend $2 - $3 million per year over the next several years on this program.

Staff is tracking the costs of the perchlorate response program separately in an effort to obtain full reimbursement. If the District is not successful in obtaining full reimbursement, the cumulative revenue shortfall in South County would worsen.

Rolling Three-Year Rate Intention

Although it was staff's objective to add another year to the three year intention for Board consideration, financial uncertainty precluded staff from recommending that the Board adopt another three year rate intention this year.

The Water Utility continues to lose approximately $300,000 per year of property tax revenue from the 1992-93 property tax shift action taken by the State. Currently, about $2.5M per year or 2%, of North County revenues are at risk from a further shift in 1% property taxes. Approximately $600,000 or 10% of revenues are at risk in South County. In response to the Governor's recent proposal to shift 40% of the 1% property taxes away from enterprise funds in FY 2004–05 and FY 2005–06, the District has created a "State Impact–ERAF" reserve. The reserve sets aside $2.6 million to cover the potential impact of the shift. If the Governor's proposal occurs and the reserve is used, it will worsen the cumulative revenue shortfall in South County in those years and may impact the rate projection in both the North and South County. In addition, the District is at risk of not being completely reimbursed for the costs incurred under the District's perchlorate response program.

Ten-Year Rate Projection

Figure 1-1 shows the ten-year rate projection for treated water and groundwater charges for M&I users assuming no shift in 1% property taxes and that perchlorate-related costs are funded by Water Utility reserves.

The ten-year rate projection includes well-defined capital project estimates in the District's Capital Improvement Plan (CIP). It also includes a cost "placeholder" beginning in FY 2006–07 for projects in various stages of planning. Preliminary cost estimates for asset management, IWRP, and the San Luis Lowpoint projects can be absorbed within this placeholder. In some years, the placeholder has additional capacity that could partially fund other projects such as infrastructure reliability investments, incremental water banking investments, and Coyote Valley Development. These and other items are in the planning stages and include a wide range of potential program costs and facility investments. The projected costs that could result from these studies are not included in the ten-year projections because of the high degree of uncertainty regarding the District's role and its share of future costs. Moreover, in several cases, there is no clear demand among our customers for the District to invest in these ventures. At such time that the level of investment becomes better defined for projects not included in the CIP, there may be an upward impact on rates.

SUMMARY

Section II

Section II presents data on the County's water supply and water usage. Water supply records indicate a somewhat stable trend over the past three calendar years, 2002 through 2004. Water use in calendar year 2003 was less compared to 2002. In 2002, water usage was recorded at 382,400 AF, and in 2003, at 367,200 AF. Water use in 2004 is projected to increase slightly to 387,100 AF.

Section III

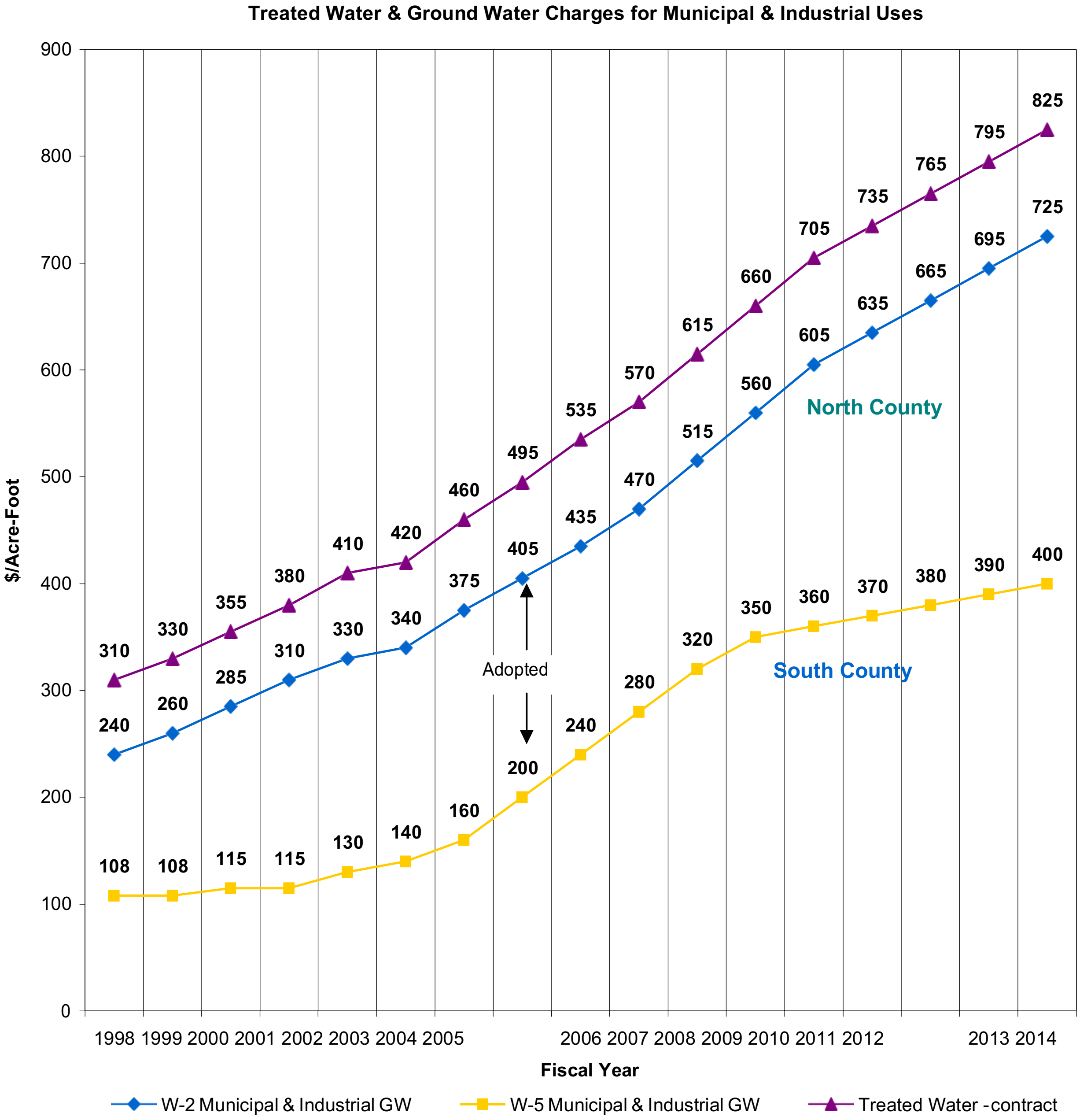
Section III describes water supply and quality challenges facing the Water Utility and the District activities to address them. The activities exhibit the District's continuing efforts to conserve and augment its water supplies and are the primary reason for the need for water charges. A major operations project that will continue into FY 2004–05 is the perchlorate contamination cleanup in the San Martin area. Capital projects at the forefront of the District's plans in FY 2004–05 include continuing construction at Santa Teresa and Penitencia. Rinconada Stage 2 is scheduled to begin in March 2006.

Section IV

Section IV discusses the revenue required to meet needs in FY 2004–05 and describes the financial analysis for the two water charge zones. This section also includes a projection of the Water Utility finances over the next 10 years. For FY 2004–05, the District plans to invest primarily in Water Banking and the Stage 2 of the Santa Teresa and Penitencia Water Treatment Improvement Projects. The overall revenue requirement for FY 2004–05 is projected to be $201.3 million. The Water Utility program requirements will be met from a combination of current revenues, reserves, and debt.

For FY 2004–05, North County water rates were increased to the level that was projected last year. South County water rates were increased above what was projected last year in order to bring annual revenues closer to expenditures. As illustrated in the following figure, North County groundwater rates are currently projected to increase at an average of 8.3% per year between FY 2004–05 and FY 2009–10. South County groundwater rates are projected to increase at an average of 14.7% per year during the same time frame. The total incremental revenue between FY 2004–05 and FY 2013–14 will be used to fund increased operating costs driven by steep increases in the cost of federal water and higher water treatment costs as a result of converting to the use of ozone as the primary disinfectant. Higher rates are also needed to pay debt service on capital expenditures currently underway and future construction at reservoirs and water treatment plants.

FIGURE 1-1
Ten- Year Rate Projection



II. SANTA CLARA COUNTY WATER REQUIREMENTS AND SUPPLIES

LONG-TERM WATER USE TRENDS

Water use in the County is categorized as either agricultural or M&I. Recorded North County water use since FY 1964–65 and South County water use since FY 1987–88 (when the District merged with Gavilan Water Conservation District) is shown in Figures 2-1 and 2-2, respectively. Metcalf Road is the dividing line between North County Zone W-2 and South County Zone W-5 (see map of Water Utility Zones in Appendix C).

Both District and non-District water use in North County, as shown in Figure 2-1, is predominantly M&I. Projections from the 2002 Integrated Water Resources Plan (IWRP) indicate an increase in M&I use through 2020, when the North County annual M&I water use is projected to be 354,000 AF. Agricultural water use is expected to be approximately 1,000 AF per year by the year 2020 in North County, or less than one percent of the total North County water use.

In South County, it is anticipated that M&I water use will continue to increase while agricultural use is expected to decline (see Figure 2-2). The latest projections for South County anticipate total water use of about 72,000 AF by the year 2020. M&I and agricultural water uses are projected to be 45,000 AF and 27,000 AF that year, respectively.

The projected water usage for the County discussed above totals 427,000 AF in 2020. This represents the likely outcome of many factors, including population trends, employment growth, and water conservation practices. Per the Urban Water Management Plan (April 2001), alternative population and economic assumptions could lead to total County water needs ranging from as low as 416,000 AF to as high as 478,000 AF in 2020.

The drought and economic downturn during the early 1990s drove a decrease in the County water use from 1987 to 1991. District records show the total per capita water use was 231 gallons per day in 1988. By 1991, the per capita use dropped steadily to 171 gallons per day. Once drought conditions and the economic recession eased, the County began a general upward trend in water consumption from 1992 to 1997. For this time period, the per capita water use gradually increased from 182 gallons per day to 210 gallons per day. Water use dropped to 185 gallons per capita per day in 1998 due in part to unusually wet weather early in the year, which helped reduce demand for water used in agriculture and landscaping. Since 1998, per capita water use gradually increased to 199 gallons per day in 2002. In 2003, per capita water use is estimated to have decreased to 188 gallons per day due to the unexpected rains that occurred during early Spring.

LONG-TERM WATER SUPPLY OUTLOOK

The District's water supply includes water imported from the Sacramento-San Joaquin Delta, local water stored in reservoirs and groundwater subbasins, water banked in San Joaquin Valley, and recycled water. The Santa Clara groundwater subbasin is in the North County, while both the Coyote and Llagas groundwater subbasins are in South County (see Groundwater Subbasins and Major Recharge Systems Map in Appendix C).

Sources of water supply in North County consist of locally developed water, recycled water, and water imported via the State Water Project (SWP), the Federal Central Valley Project (CVP), and the City and County of San Francisco's Bay Division Pipelines (Hetch Hetchy). South County is supplied by locally developed water, recycled water, and CVP water imported via the San Felipe Division. The recorded water supply in North County since FY 1964–65 is shown in Figure 2-3, and South County since FY 1987–88 is shown in

Figure 2-4. Projected supplies of local, recycled and imported water are shown to the year 2020. Projected supply availability figures are based on the long term average (LTA) supply projections to the year 2020 presented in the District's ongoing IWRP. According to the Urban Water Management Plan, the LTA supply is defined as the average supply available over the historic hydrological record, given currently existing facilities. For imported water supplies, this is the average supply the District could expect with currently existing facilities and contractual demands over the historical hydrology from 1922 through 1990, with current environmental regulations in place. As can be seen in the historical data, the District is often unable to use all of the imported water available in a year.

In working toward ensuring a reliable future water supply, the District is engaged in several activities. Within the County, the District continues its conjunctive use program of recharging surface water to augment groundwater supplies. Additionally, the District is providing financial incentives to wastewater agencies for delivery of recycled water for nonpotable uses and has signed a partnership agreement with the City of San Jose to explore the future development of recycled water. Local supplies will continue to be supplemented in the future with nonpotable water from recycled water facilities in San Jose, Sunnyvale, and the South County Regional Wastewater Authority (SCRWA) serving Gilroy and Morgan Hill.

The District, along with numerous other urban water agencies, is participating in the statewide Water Conservation Memorandum of Understanding to implement 16 urban water use best management practices (BMP). In addition, the District manages urban water use conservation programs beyond the BMPs and is implementing agriculture water conservation practices as required under the CVP Improvement Act (CVPIA). These activities are more fully described in Section III, Benefits and Services Provided by the District.

DISTRICT WATER SUPPLIES AND USE

The following tables show calendar year activities for 2002 and 2003 and the plan for calendar year 2004 reservoir operations, raw water conveyance, treated water production, and groundwater recharge. Table 2-1 summarizes water use recorded and projected in the County for calendar years 2002, 2003 and 2004. Table 2-2 documents District and non-District annual water supply and distribution management activities, Table 2-3 summarizes District out-of-county water banking activities for those three years, and Table 2-4 summarizes the District's Environmental Water Account agreements. The differences between Tables 2-1 and 2-2 can be accounted for by changes in surface water and groundwater storage. Moreover, Table 2-2 summarizes only those supplies managed by the District or other agencies. The groundwater basin is also replenished by naturally occurring recharge in areas not managed by the District or others.

FIGURE 2-1
North Santa Clara County Water Use
Zone W-2

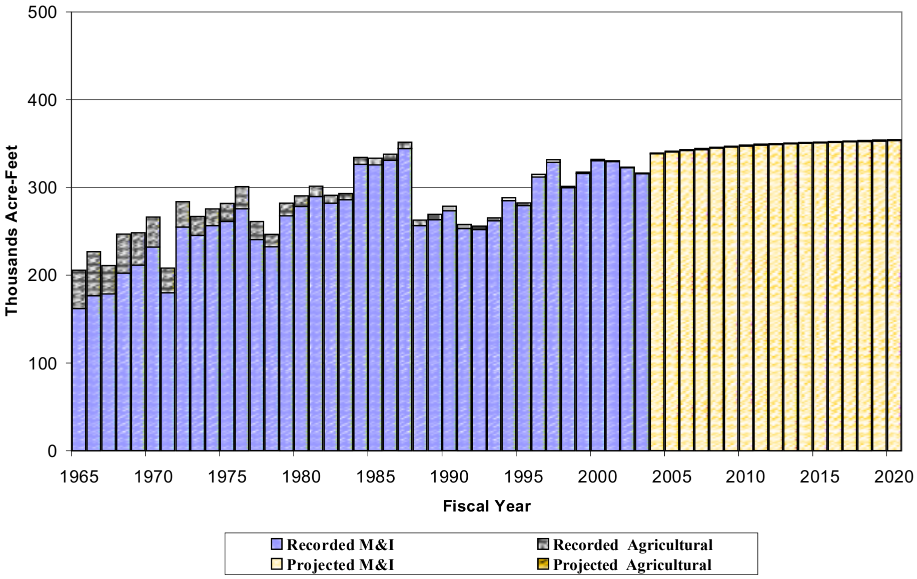


FIGURE 2-2
South Santa Clara County Water Use
Zone W-5

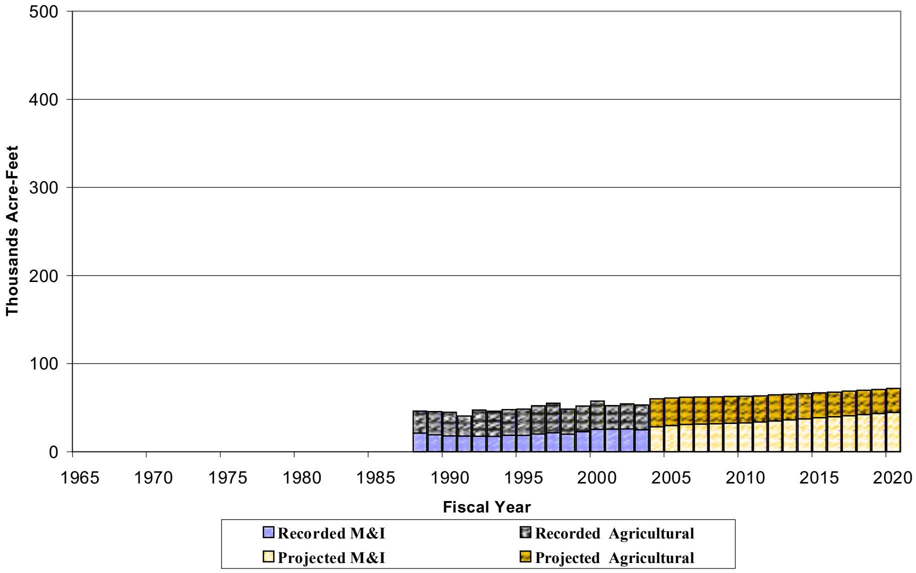


FIGURE 2-3
North Santa Clara County Water Supply
Zone W-2

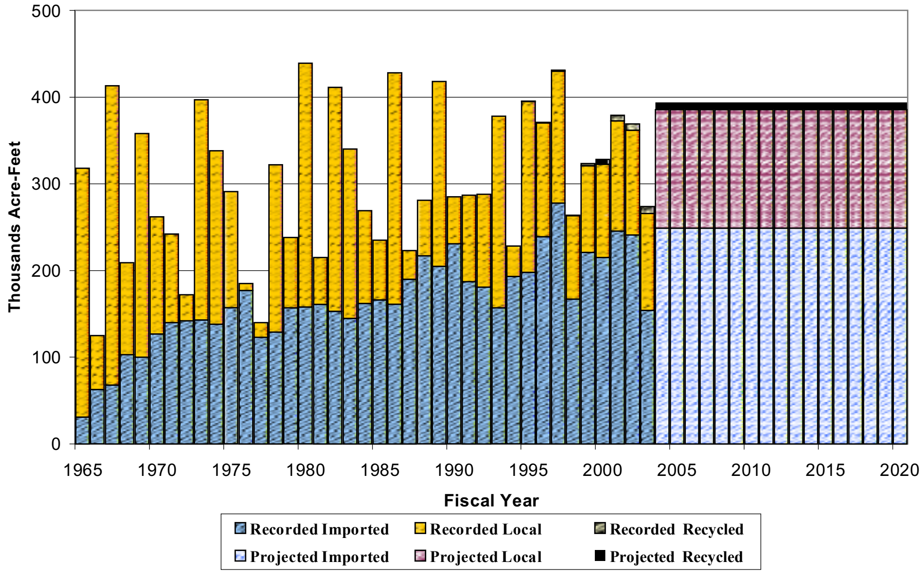
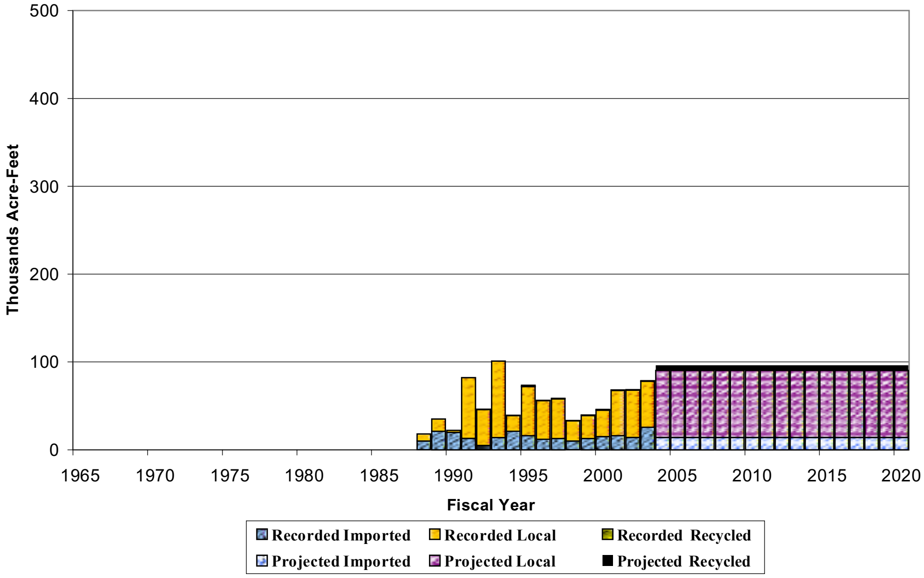


FIGURE 2-4
South Santa Clara County Water Supply
Zone W-5



Note: North and South County projected supply *availability* figures are based on the long term average (LTA) of allocated entitlement presented in the District's January 1997 Integrated Water Resources Plan (IWRP). Recorded supply figures reflect the amounts of supply *taken*. Supplies *taken* are often less than the supplies *available* due to system capacity limitations. Supplies that are not taken in a single year are carried over, banked out of County, exchanged, or sold.

TABLE 2-1
Water Use for Calendar Years 2002 Through 2004 (Acre-Feet)
Santa Clara County

	Actual 2002	Actual 2003	Projected 2004
I. WATER PRODUCTION			
In-District Groundwater Pumping	157,800	146,900	158,000
District Treated Water	143,800	130,600	143,700
District Surface Water Irrigation	3,100	3,000	3,000
Recycled Water	500	600	500
Non-District (Import, Local, & Recycled)	77,200	86,100	81,900
TOTAL WATER PRODUCTION	**382,400**	**367,200**	**387,100**
II. WATER USE			
District Municipal & Industrial	275,800	253,500	276,200
District Agricultural	29,400	27,600	29,000
Non-District (Import, Local, & Recycled)	77,200	86,100	81,900
TOTAL WATER USE	**382,400**	**367,200**	**387,100**

Recorded Operations for Calendar Year 2002

In 2002, the total water use in the County was 382,400 AF. Rainfall in the 2002 calendar year totaled 12.98 inches in downtown San Jose, about 90 percent of average. Water use from District sources included 275,800 AF of M&I and 29,400 AF of agricultural water. Non-District use totaled 77,200 AF provided by non-District sources (Hetch Hetchy, Stanford and San Jose Water Company reservoirs, and recycled water deliveries). Of the District water used, 157,800 AF were provided through groundwater pumping, 500 AF through recycled water produced by South County Regional Wastewater Authority, and 143,800 AF were delivered from our three water treatment plants. In addition, 3,100 AF were delivered from surface waters for direct use. Table 2-1 presents a detailed look at the in-county water demand.

Table 2-2, which excludes natural recharge, depicts how the water supply was managed and distributed in 2002. The District imported approximately 193,600 AF of water from three sources. In addition to its SWP and CVP supplies, the District received water from the intertie with the San Francisco Water District (SFWD). The intertie provided 410 AF to help meet treated water needs while PWTP was closed for construction. The District released approximately 72,750 AF from its reservoirs for groundwater recharge or treatment in one of our three treatment plants. The remainder of the District demand was met with natural recharge or carryover storage from our groundwater basins.

TABLE 2-2
Annual Water Supply And Distribution For Calendar Years 2002 Through 2004 (Acre-Feet)
Santa Clara County

Water Supply	Actual 2002	Actual 2003	Projected 2004
I. ANNUAL WATER SUPPLY			
District Supply			
Imported Water To County			
SFWD Intertie	410	-	-
CVP Imports	134,270	106,400	125,000
State Water Project Imports	58,880	76,100	65,700
Total District Imports	193,560	182,500	190,700
Local Surface Water	72,750	90,500	81,500
SCRWA Recycled Water	500	600	500
Non-District Supplies			
Hetch Hetchy	61,020	59,400	61,100
Other Reservoirs and Streams (SJWC and Stanford)	8,370	14,900	10,600
Other Recycled Water	7,810	8,200	9,000
TOTAL	**344,010**	**356,100**	**353,400**
II.DISTRIBUTION OF ANNUAL WATER SUPPLY			
Distribution Within District System			
To Treated Water	144,180	130,600	143,700
To Surface Water: Irrigation/Environment	15,170	24,200	11,700
To Recycled Water	500	600	500
To Managed Recharge			
Santa Clara Groundwater Subbasin	71,660	74,800	82,800
Coyote & Llagas Groundwater Subbasins	35,300	43,400	34,000
Subtotal of Distribution to District System	**266,810**	**273,600**	**272,700**
Non-District Distribution			
Hetch Hetchy	61,020	59,400	61,100
San Jose Water Co. and Stanford	8,370	14,900	10,600
Other Recycled Water	7,810	8,200	9,000
Subtotal of Non-District Distribution	**77,200**	**82,500**	**80,700**
TOTAL	**344,010**	**356,100**	**353,400**

Note: The annual water supplies reported in this table include only volumes managed by the District and others that are readily estimated. CVP import supplies exclude sales and transfers to the Environmental Water Account and Westlands Water District. SWP import supplies exclude amounts banked at Semitropic Water Storage District due to the fact that these activities take place outside of Santa Clara County. In addition to the managed recharged data included in the table, County groundwater supplies are augmented by naturally occurring recharge each winter and spring. These ‘unmanaged’ amounts are essential to County groundwater supplies and allow for the fact that the in-district groundwater pumping volumes in Table 2-1 usually exceed the annual managed recharge.

Recorded Operations for Calendar Year 2003

In 2003, the total water use in the County was 367,200 AF. Rainfall in the 2003 calendar year totaled 13.59 inches in downtown San Jose, which is approximately 94 percent of average. Total water use included 253,500 AF of M&I and 27,600 AF of agricultural water. It also includes 86,100 AF provided by non-District sources (Hetch Hetchy, Stanford and San Jose Water Company reservoirs, and recycled water deliveries). Of the District water used, 146,900 AF was provided through groundwater pumping, 600 AF through recycled water, and 130,600 AF was delivered from our three water treatment plants. In addition, 3,000 AF was delivered from surface waters for direct use. Table 2-1, which includes supplies available from natural recharge, presents a detailed look at the in-county water demand in 2003.

Table 2-2, presents how the water supply was managed and distributed in 2003. The District imported approximately 182,500 AF of water from the State and Federal Water Projects. Local water releases totaled approximately 90,500 AF for delivery to groundwater recharge ponds or one of our three treatment plants. SCRWA produced 600 AF of recycled water. The remainder of the District demand was met with natural recharge or carryover storage from our groundwater basins.

Projected Operations for Calendar Year 2004

The District's annual Operations Plan describes how supplies available to Santa Clara County will be used. A preliminary plan based on conditions known in March 2004 is summarized in Table 2-2. As of July 1, 2004, the 10 District reservoirs had a combined storage of approximately 94,861 AF, or about 56.2 percent of capacity, compared to 57.6 percent in July 1, 2003. Over the last twenty years the 10 District reservoirs averaged 95,030 AF in storage.

Imported water supplies are currently projected to be less than the District's contractual entitlements. On March 22, 2004, the Department of Water Resources (DWR) announced that 65 percent) of the SWP entitlement of 100,000 AF will be available to the District. And, on March 22, 2004, the Bureau of Reclamation announced allocations of 65 percent of the 33,100 AF of CVP agricultural water, and 75 percent of the 119,400 AF of CVP M&I water entitlements. However, due to the District's Reallocation Agreement, the District will receive up to 97,500 AF of M&I water from CVP. This would result in a total supply of approximately 119,015 AF of CVP water (compared to a five-year average of 106,800 AF) and 65,000 AF of SWP water (compared to a five-year average of 60,300 AF), for a total of 184,015 AF of available imported water.

In addition to the imported water allocation, the District is also expected to receive 14,800 AF of carryover and 5,900 AF of exchange or other imported water in 2004. Of the available imported water supply amount of 204,700 AF, the District plans to use 190,700 AF in County this year and take the overage as carryover in the future.

The District's 2004 Operation Plan provides projections of how District managed water (locally conserved and imported water) and other sources (Hetch Hetchy, recycled water and San Jose and Stanford stored surface water) will be distributed to efficiently use recharge facilities and provide treated water to meet demands. Table 2-2 shows the planned distribution of the projected supplies of 353,400 AF for 2004. The difference between projected supplies and the projected demand shown in Table 2-1 can easily be met from natural recharge and available storage in the groundwater basins.

Imported Water Operations

Water Reallocation Agreement

In 1997, the District executed a Water Reallocation Agreement with the US Bureau of Reclamation and agricultural districts in the San Luis and Delta-Mendota Water Authority that establishes the basic level of reliability for the District's CVP M&I water supplies. This 25-year agreement resolved disputes related to the US Bureau of Reclamation's M&I Water Shortage Policy that provides CVP M&I water allocations of no less than 75 percent of historic use under most shortage conditions. In addition, Westlands and San Luis Water Districts agreed to augment the District's supplies in certain years to bring District CVP M&I reliability up to 75 percent of contract amount. In return, the District has reallocated 100,000 AF of CVP water to the agricultural districts, and will continue to optimize water supplies to reallocate more water if possible over the term of the agreement.

Water Banking

To provide reliability in future years, the District banks water in groundwater storage outside of the County. This involves conveyance of the District's State or Federal water supplies to a banking partner, another water district that operates a groundwater conjunctive use program. Storage in the bank occurs when water is physically delivered to ponds to soak into the aquifer, or when surface water deliveries are used by the banking partner in lieu of groundwater pumping ("in-lieu recharge"). Return of stored water is accomplished when the banking partner uses groundwater in place of surface supplies, or physically pumps groundwater into the surface conveyance system. The District primarily banks State Water at the Semitropic Water Storage District in Kern County, but has banked CVP water at the San Justo Reservoir in San Benito County in the past. Table 2-3 shows the annual changes and year-end balances for banked water during calendar years 2002 through 2003, and to projected activity in 2004.

TABLE 2-3
District Water Banking for Calendar Years 2002 Through 2004

Water Banking	Actual 2002	Actual 2003	Estimated 2004
SEMITROPIC WATER STORAGE DISTRICT (SWP WATER)			
Beginning Balance (January 1)	111,777	114,777	144,477
District Deposit or Withdrawal	3,311	33,000	0
Environmental Water Account (EWA) Withdrawal	0	0	0
Transaction Losses	-311	-3,300	0
TOTAL BANKED ENDING BALANCE (DECEMBER 31)	**114,777**	**144,477**	**144,477**

Water Exchanges

In recent years, the District has exchanged CVP allocations with San Benito Water District, in order to improve water management by taking advantage of a difference in each district's contract year. The District purchases water for San Benito in summer months in return for San Benito returning a like amount, usually about 14,000 to 15,000 AF to the District in January and February. This agreement allows the District to "hedge" against the CVP allocating a reduced supply in the following contract year. For the first time, in November 2002, the District and San Benito exchanged CVP allocations in the reverse direction, with San Benito purchasing 2,000 AF for the District at the end of 2002 and early 2003, in return for the District's obligation to return a like amount, subject to certain conditions, later in 2003. The District has also participated in a small, trial water banking program with San Benito utilizing San Justo Reservoir. This program provided limited benefits to the

District.

Water Transfers

The District uses temporary or "spot market" water transfers to manage year-to-year variability in CVP and SWP supplies, and to reduce overall costs of the imported water program. For example, until late April 2003, it appeared that CVP and SWP allocations would be as low as 45%. To ensure current water supply reliability, the District purchased 28,000 acre-feet of transfer water through six separate transactions at prices that compared favorably to the District's normal CVP and SWP water costs. By mid-summer allocations had increased substantially to 75% on the CVP and 90% on the SWP. The District was then able to sell 20,000 acre-feet to the CALFED Bay-Delta Program's Environmental Water Account (EWA)and recover the cost of spot market purchases made earlier in the year. Table 2-4 summarizes recent EWA transactions.

The District also has one small long-term water transfer agreement, a CVP agricultural water service contract for 6,260 acre-feet that is shared jointly with Westlands Water District and Pajaro Valley Water Management Agency. Under this 1999 agreement, the District has the "right of first refusal" in every year to the allocated supply, but is limited to 25% of the total supply allocated over the first 20 years. The District exercises its right in dry years, and has so far taken delivery only once (4,300 AF).

TABLE 2-4
Environmental Water Account Agreements for Calendar Years 2001 Through 2004

Terms (In AF)	Actual 2001	Actual 2002	Actual 2003	Estimated 2004
Sale of Water from District to EWA	30,000	-	20,000	10,000 - 30,000
Sale of Semitropic storage by District to EWA	20,000			20,000

Note: Source of water for sales include the District's Semitropic storage or excess imported water from CVP.

III. BENEFITS AND SERVICES PROVIDED BY THE DISTRICT

Section 26.5 of the District Act specifies that this annual report provide details on the District's "...activities in the protection and augmentation of the water supplies of the district." Protecting available resources and planning for and augmenting future supplies requires that the District levy charges on the production of groundwater and enter into financial contracts for the delivery of treated surface water. The importation of water and management of local water supplies requires that the District undertake a wide range of supporting functions. This section describes the benefits and services that the District provides under the general headings of:

- Overall Resource Management
- Water Supply Augmentation
- Water Quality Protection
- Capital Improvements

OVERALL RESOURCE MANAGEMENT

Long-Term Planning for Water Supply

As the water management agency and water wholesaler for Santa Clara County, the District is responsible for planning the County's long-term water supply. Ensuring a safe and reliable water supply in the face of periodic droughts and increasing competition for water supplies from other urban, agricultural and environmental water users throughout the state is a significant challenge. In February 2002, the District joined with other water agencies to form the Bay Area Water Agencies Coalition. This team will create a unified voice for Bay Area water suppliers and provide a forum to discuss regional water issues.

District staff have recently completed a draft Integrated Water Resources 2003 Planning Study. The IWRP 2003 is designed to be an on-going process that provides a framework for the District to evaluate water supply investment options and implement programs and projects to meet the Board's policy that "There is a reliable supply of healthy, clean drinking water." The IWRP is also designed to provide an incremental and flexible implementation strategy in order to be able to plan for and react to the many challenges of the future.

The main challenges that IWRP addresses include: dry year supply shortages, drinking water quality concerns related to both surface water and groundwater, population growth statewide and in the County, environmental water needs and fisheries protection measures that impact the reliability of imported and local water supplies, infrastructure failure risks, unanticipated changes in water demand due to land use changes, and long-term climate changes that impact availability of water supplies and controlling costs.

The IWRP 2003 recommends a number of near-term actions to be implemented between now and 2010, as well as strategies to keep longer-term options open. As near-term actions are being implemented, the District will continuously monitor for risks as well as opportunities that could trigger the need for longer-term water supply investments.

Foremost in the District's IWRP strategy is the need to develop and promote partnerships that are essential to implementation success. The District will continue to actively participate in statewide, regional and local planning processes and promote strategic partnerships that can provide regulatory certainty and facilitate program and project implementation.

Stream and Watershed Management

The District plays a key role in balancing the water needs of a growing economy with those of the environment. The District has initiated a watershed management approach as a responsible steward of watersheds, including streams and riparian corridors. For example, in October 1997, the Fisheries and Aquatic Habitat Collaborative Effort (FAHCE), which is comprised of the District, the California Department of Fish and Game, National Marine Fisheries Service, U.S. Fish and Wildlife Service, Natural Heritage Institute and the City of San Jose was formed to study the aquatic habitats in our managed streams and the impacts on them from District facilities and operations.

Stream maintenance projects are planned, designed, constructed, and operated in an environmentally sensitive manner to address reservoir water storage, and in-stream and off-stream groundwater recharge. Project specific measures are taken to protect sensitive species, water quality, fisheries, riparian and wetland resources. New management practices include scheduling the work to avoid impacts to nesting birds, removing sediment from half of the channel in alternating years on certain creeks, diverting flows around a work site, reseeding disturbed areas, and relocating fish.

Changes in land use and new developments can negatively impact water quality and District facilities. To minimize these impacts, the District's Community Projects Review Unit enforces the District's Ordinance 83-2, which regulates activities near District facilities, reviews external environmental documents, and coordinates with cities and other agencies with regard to their land use decisions.

Together, the foregoing activities strive to protect County habitat, while accommodating water supply and other human impacts.

Flood Protection and Stream Stewardship Program

To address community expectations and the District Board's Ends Policies on quality of life in the County, the District is using additional funding from its voter-approved Special Tax to provide for restoration and enhancement of natural resources within our watersheds. This element is an important part of the Clean, Safe Creeks and Natural Flood Protection Plan approved by County voters in November 2000.

The Clean, Safe Creeks plan will also protect water quality in our creeks and bays, and will benefit water supplies. Portions of the additional funding will be used to keep our creeks cleaner and free from trash and pursue improved detection and management of toxic materials (such as mercury and diazinon) that pollute our water supplies, creeks and Bay.

The District also participates in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) as a co-permittee. The objective of the SCVURPPP is to protect stream resources by preventing pollution from entering our creeks and the Bay. Each of the co-permittees implements its own, agency-specific storm water pollution prevention program. These activities, and the level of implementation, are specified in Performance Standards. Currently, the District implements Performance Standards for:

- Illicit Connection and Illegal Dumping Elimination Activities
- Industrial/Commercial Discharger Control Program
- Public Streets, Roads, and Highways Operation and Maintenance
- Storm Drain System Operation and Maintenance
- Water Utility Operation and Maintenance
- Planning Procedures

- Construction Inspection

In addition, the District collaborates in various program-wide efforts, including public education and monitoring.

Hydrologic Data Management

The District supports numerous data collection and analysis efforts covering rainfall, stream flows, reservoir storage, water use, groundwater levels, and other information that is essential to planning and operating our water distribution and delivery system.

Public Affairs

The Office of Public Affairs (OPA) supports and facilitates the Board of Directors' link to the general public, public officials, community leaders and policy makers and works in partnership with Operations and Administration to enable the Water District to achieve its mission and its ends policies. Such efforts are an important component of the water utility operations, including water conservation and resource protection programs, as they help ensure safe and reliable future supplies. Specifically, OPA's Government Relations unit performs anticipatory issues management, monitors emerging policy trends; ensures access to key decision makers; provides support to effect policy change related to the District's mission; cultivates relationship building and advocacy opportunities and serves as the internal and external connection for legislation, regulatory action and funding opportunities which affect the District. Its Community Relations unit performs integrated marketing and distribution of the District's key messages, including developing and managing the District's visual identity; serves as principal liaison to the news media; and develops effective general and ethnic outreach to inform the public, shape public opinion and mobilize support for District activities.

WATER SUPPLY AUGMENTATION

To maintain sufficient water supplies to support economic growth and maintain the quality of life in our community, the District aims to ensure adequate water supplies in both the short- and long-term. Obtaining adequate supplies for the future has two aspects: maintaining the reliability of existing supplies through both wet and dry years and developing access to additional supplies to meet future needs.

Ensuring the availability of 300,000 AF annually to 15 cities spread over 1,300 square miles requires operation of the following facilities:

- 10 surface reservoirs with a capacity of 169,000 AF
- 17 miles of canals
- 393 acres of recharge ponds
- 76 miles of controlled in-stream recharge in the County
- 142 miles of pipelines
- Three water treatment plants
- Three pump stations

To manage the County's water storage reservoirs, both surface and underground, the District operates and maintains a countywide conservation and distribution system (see Water Conveyance, Treatment, and Distribution map, Appendix C). The system conserves local runoff for either recharge into the groundwater basin or treatment at one of the District's three water treatment plants. The District also operates several local pipelines to transport imported raw water and locally-conserved water to various locations within the system for treatment and distribution or for groundwater recharge.

The District has long-term agreements to purchase water to augment local water supplies through the CVP and SWP facilities. In addition, the District supports the development of recycled water and promotes water conservation in homes, business, and agriculture. A significant effort is also dedicated to preparing long-range water supply plans, including planning for droughts. The principal activities of the District in augmenting water supplies are described below.

Managing Groundwater Recharge

The District operates ten reservoirs that conserve water for later recharge into the groundwater subbasins. The three interconnected subbasins (see Groundwater Subbasins and Major Recharge Systems map, Appendix C) have a maximum operational capacity of approximately 525,000 AF and normally provide one-half of the County's annual water supply for potable use. Groundwater storage is replenished using eighteen major recharge systems within these three subbasins. In addition to local water, these facilities also percolate imported water into the aquifer. The annual average recharge capacity of these systems is 157,200 AF.

Although groundwater subbasins are also replenished by water that percolates through the beds of unmanaged streams, without the District's recharge facilities the majority of the natural stream runoff would flow out to the Bay.

The Santa Clara Valley subbasin underlies the northerly portion of the District and includes the majority of the streams and recharge facilities operated by the District. In 2003, the District replenished this subbasin with approximately 79,200 AF of locally-conserved and imported water. The Coyote and Llagas subbasins in the southerly portion of the District were replenished with approximately 32,500 AF of locally-conserved and imported water.

Surface Water Transportation and Storage

Water supply reliability includes both the availability of the water itself as well as the reliability and integrity of the infrastructure and systems that transport and store it. Thus, all activities related to operating and maintaining the District's dams, reservoirs, canals, and pipelines are directly related to providing water supply.

District facilities are subject to regulation regarding seismic performance of dams, reservoir landslide monitoring and evaluation, and periodic field inspections. Consequently, maintenance activities include continuing liaison and data exchange with the State Division of Safety of Dams and the Federal Energy Regulatory Commission with regard to the safety of District dams.

Imported Water

The SWP, CVP, and City and County of San Francisco's Hetch Hetchy Project provide approximately 60 percent of water supplies in average years to the County. Imported water is conveyed to the County through the South Bay Aqueduct, which carries water from the State Water Project; the federal San Felipe Division, which brings water from the CVP; and the Hetch Hetchy Aqueduct, which brings water from the Hetch Hetchy Reservoir in the Sierra Nevada Mountains.

Management of the imported water program includes protecting the District's assets (CVP, SWP, and other contract rights); meeting current year operational needs for imported supplies; developing water transfers, exchanges and banking agreements to support the IWRP; and controlling costs. Annual imported water costs are approximately $30 million, a significant portion of the Water Utility budget. Controlling these costs involves close monitoring of appropriate State and federal budgets, cost allocations, and water rates for the CVP and SWP, and related CALFED programs. Financial issues frequently arise that must be resolved through negotiation among contractors and the Project agencies, administrative procedures, and sometimes legislation or litigation. In addition, if there is no conflict with water reliability goals, the District offsets costs by using imported water assets to generate revenue. The District has sold wet-year water and provided temporary storage options to the Environmental Water Account (EWA) in recent years, generating revenues of approximately $13 million to offset the costs of purchasing water.

Maintaining reliable access to high-quality supplies of imported water is essential to meeting current water needs and to implementing the District's IWRP strategy for future water supplies. Both Board and staff members devote considerable time in three areas: Resolution of Bay-Delta Issues through the CALFED process, Water Banking, and Managing CVP and SWP Contract Issues. Each of these is discussed below.

Resolution of Bay-Delta Issues: (CALFED Bay-Delta Program)

The District imports water through the San Francisco Bay/Sacramento-San Joaquin River Delta Estuary (Bay-Delta) under contracts with the SWP and the Federal CVP. The Bay-Delta is the largest estuary on the west coast and supports more than 750 species of plants and wildlife. The Bay-Delta also provides water supply to more than two-thirds of the population in the state and to agriculture in the Central Valley and the San Felipe Division. However, decades of competing demands have taken a toll on the Bay-Delta and today it no longer functions as a healthy ecosystem or as a reliable source of water. Regulatory actions to protect threatened or endangered fish have reduced the reliability of Bay-Delta water supplies. Water quality is degraded, making it difficult and expensive to meet drinking water standards. In addition, the vulnerability of delta levees to seismic and flooding failures threatens both the infrastructure and the quality of California's water supply.

The District plays an active role in resolving these Bay-Delta issues by participating in the state/federal/public CALFED process and other related processes. Since the signing of the Bay-Delta Accord in December 1994, a coalition of state and federal agencies, known as the CALFED Bay-Delta Program, has been developing a plan for resolving Bay-Delta issues in cooperation with environmental, business, urban, and agricultural interests. In July 2000, CALFED released its Final Programmatic EIR/EIS (FPEIR/S). A Record of Decision (ROD) and Notice of Determination were adopted in August 2000. Legislation in 2002 created a California Bay-Delta Authority to oversee implementation of the Bay-Delta Program.

The District is a leader in garnering broad support for the CALFED Bay-Delta Program. A successful Bay-Delta resolution is absolutely essential to address California's water problems and to maintain the public welfare and the economic viability of the state.

The CALFED Bay-Delta Program received a major boost in November 2002 with the passage of Proposition 50, a $3.44 billion water bond that will provide $825 million for the CALFED Program and $1.3 billion for related projects. This District was an early supporter of Proposition 50, and was also a leader in efforts to secure a long-term federal funding authorization for the CALFED Program. That effort last year resulted in the approval of a limited, one-year authorization for the Program. Efforts to secure a comprehensive authorization bill are continuing in 2004. Senators Feinstein and Boxer have introduced a bill in the Senate to authorize $389 million in federal funding for those elements of the Program not already authorized under existing federal law. Representative Calvert has introduced a similar bill in the House of Representatives. As of May 2004, both bills have moved out of their respective policy committees and await action by the full Senate and House. The District supports both the Senate and House bills and has committed to work with the authors as the bills moves through the legislative process.

The District supports the CALFED Bay-Delta Program through i participation in the Environmental Water Account (EWA). As described in the CALFED Record of Decision, the purpose of the EWA is “to provide water for the protection and recovery of fish beyond water available through existing regulatory actions…at no uncompensated water cost to [CVP and SWP] water users.” As long as the EWA has the prescribed level of “assets” (water supplies) available to it each year, CVP and SWP water users gain assurances from regulatory agencies that protect tem from additional water supply losses under the State and Federal Endangered Species Act. In 2001, the District sold DWR 30,000 AF of stored water from its inventory water in the Semitropic Water Bank for EWA. In 2003, the District sold 20,000 AF of CVP water for EWA, and is continuing to negotiate other short-term agreements to provide needed assets for a functional EWA.

In addition, the District supports restoration of the Bay-Delta ecosystem through payments to the CVPIA Restoration Fund. In FY 2003–04, the District wil contribute approximately $2 million to this Fund.

CALFED is poised this year to move forward with its first major package of Delta infrastructure improvements. The “Delta Improvements Package” under discussion contains projects to improve Delta water quality and increase Delta water supplies, improve conditions for fish, and protect in-Delta water users. Potential benefits of the package to the District include: more reliable CVP and SWP supplies; near–term protections against the San Luis Reservoir low point; improved Delta water quality, and an extension of the EWA.

Banking Available Supplies for Future Use

The District’s IWRP identified banking of excess supplies in wet years as a central element in the preferred strategy for providing supplies needed in future dry years.

In May 1996, the Board took the first step in implementing the banking strategy when it approved an agreement with Semitropic Water Storage District to store 45,000 AF of State Water Project water. In 1997, the Board approved a long-term agreement with Semitropic. Under the terms of this agreement, the District has banked water in years 1997 through 2003. In 2001, the District sold 30,000 AF of its banked water to the State of California in support of the CALFED EWA. The EWA payments of approximately $8 million were based on the District's cost to store and retrieve water from the Bank. After the sale of this water in 2001 and replacement of this water in 2003, the District now has over 144,000 AF in storage (See Table 2-3). The total capacity available to the District until January 1, 2006, is 350,000 AF. By that date, the District must decide its permanent level of investment in Semitropic, and make any capital payment necessary to reach that level. The District’s current level of banking activity would result in an investment level of approximately 200,000 AF by January 1, 2006. To maintain the currently reserved capacity of 350,000 AF, the District would have to make an additional capital payment of approximately $21 million.

Managing Central Valley Project and State Water Project Contract Issues

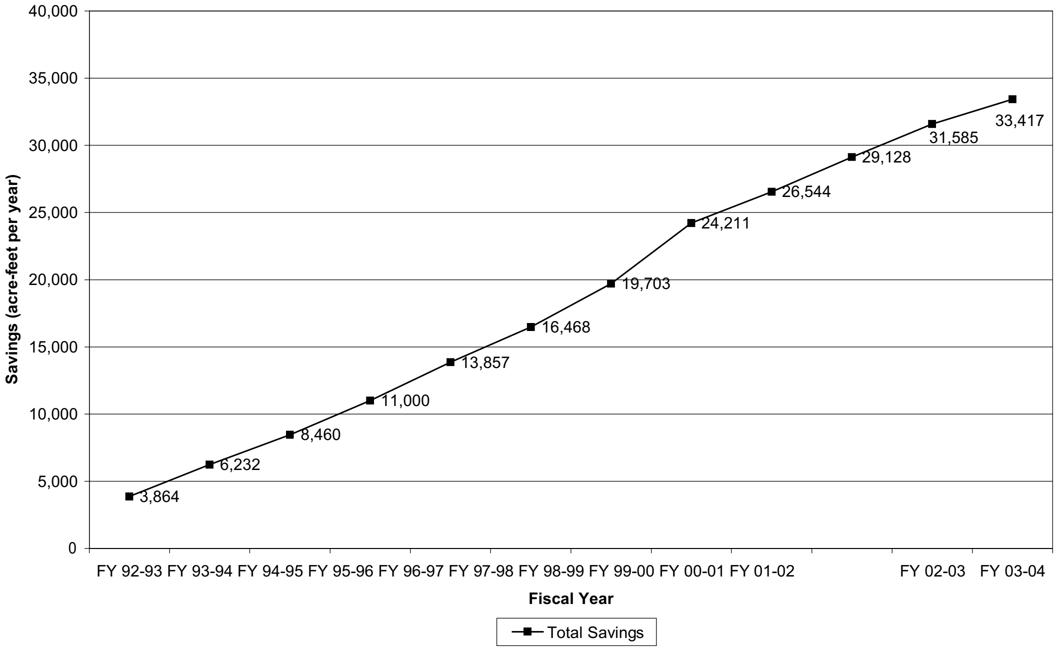
The District’s agreement with the Bureau of Reclamation provides for eventual payment of the major share of the Bureau’s costs for constructing the San Felipe Division of the CVP. The District’s 1977 contract established a fixed rate for repayment of San Felipe Division facilities during the first 20 years of water deliveries (1987 through 2006) in recognition of the District’s need to expand its local infrastructure to accept CVP water. The fixed rate provides for partial repayment of annual capital interest expense, and the cumulative shortfalls is being tracked by the Bureau as an alleged “operation and maintenance deficit,” even though the District self-funds and performs San Felipe Division operation and maintenance. The District is contesting the Bureau’s accounting for project costs. Since 1998, the District and other CVP contractors have been negotiating with the Bureau to settle these complex financial issues. Some progress has been made, and discussions are continuing with the goal of resolving these issues before the District renews its contract for CVP supplies

The District's contract with DWR for supplies from the SWP is also being amended to address a wide range of water supply and financial issues (the "Monterey Amendment"). While some provisions of the amendment reduce the reliability of the District's SWP supplies, these are offset by others that allow more efficient, cost-effective management of SWP water through transfers and banking. A settlement over litigation regarding the Monterey Amendment was approved by Sacramento Superior Court on May 20, 2003.

Water Use Efficiency: Water Conservation

The District's Water Conservation Program is essential to improving water supply reliability because water savings reduce current and future water demand. State and federal conservation programs include implementing a set of BMPs contained in the California Urban Water Conservation Council's Memorandum of Understanding regarding Urban Water Conservation, adopted by our Board in 1991. The CVPIA also requires implementation of these BMPs. Key program elements include ultra-low-flush toilet (ULFT) rebates and retrofits, water-efficient washing machine rebates, low-flow showerhead and faucet aerator distribution, promoting water efficient landscaping, and implementing commercial/industrial/institutional and agricultural water management programs. The Water Conservation Program's goal, as identified in our 2003 IWRP, is to reduce yearly baseline water demands by a total of 74,000 AF (46,000 through active savings and 28,000 through passive savings) by the year 2020. To date, the District has reduced the yearly baseline water demand by 33,400 AF (11,200 through active savings and 22,100 through passive savings). Active water conservation is defined as reduced demands that are directly attributable to District programs. Passive water conservation is defined as reduced demands that are attributable to water-efficiency standards and ordinances. Figure 3-1, shown below illustrates the progress that the District is making to reach this goal.

FIGURE 3-1
Cumulative Water Savings From Conservation Programs



Between 1990 and January 2004, the District has accomplished the following:

- Ultra-low-flush toilets for residents installed: 243,144

- Ultra-low flush toilets for businesses installed: 9,486
- Water efficient washing machine rebates issued (for residents): 38,685
- Water efficient washing machine rebates issued (for businesses): 1,760
- Low-flow showerheads distributed: 123,181
- Faucet aerators distributed: 81,562
- Large turf audits completed (Irrigation Technical Assistance Program): 623 sites signed up for program - 580 meet the potential savings criteria and received an audit.
- Water-Wise House Calls (Residential Surveys) completed: 16,000 single-family and multi-family units
- Financial incentives paid to businesses for making water efficiency improvements: 63 sites received $641,138 in financial incentives, resulting in 1,403 acre feet per year in savings.
- Mobile Lab on Farm-Irrigation Management

Of the aforementioned accomplishments, residential and business ULFTs contributed to over 54 percent of the annual water savings. Faucet aerators and showerheads respectively contributed 15 percent and 10 percent of the savings. Water efficient washing machines contributed 2.6 percent of countywide annual water savings. Other programs, such as the large turf audits, Water Wise House calls and business improvements (excluding the ULFTs) collectively reflect 18 percent of the annual water savings.

The District is in the seventh year of a Mobile Lab Program, which provides County farmers with on-site irrigation system evaluations and recommendations for efficiency improvements. The District’s Agricultural Water Use Efficiency and Nitrate Management Programs continue to work closely together and offer financial incentives to encourage more efficient water use and nitrate (fertilizer) management. The In-field Nutrient Assessment Assistance Program (INAAP) matches fertilizer use and irrigation to crop needs. To date, 156 sites — representing 61 growers, have received the Mobile Lab field tests with 372 acre-feet of potential water savings identified in 2003 bringing the total annual potential savings to 2,731 AF.

The INAAP and Mobile Lab programs have recently been consolidated since May 2003, and some changes in eligibility were made. The first is the addition of an irrigation system evaluation requirement in order to link the discount more closely to the District’s goal of water use efficiency. The second is limitation of the duration of qualification to three years, after which the grower would have to obtain a new irrigation system evaluation to maintain eligibility for the discount. The three year time limit is suggested because, over time, the efficiency of an irrigation system will degrade in the absence of a maintenance program.

Discount incentives are now available for INAAP participation, in addition to those available for mobile lab participation. INAAP qualification duration lasts five years. During this period, an agronomist works with participating growers on irrigation scheduling and plant nutrition.

Several Commercial/Industrial conservation programs initiated in previous years have continued. The District installed 1,070 water efficient pre-rinse spray nozzles, at no cost, to restaurants within Santa Clara County. Furthermore, a commercial/industrial/institutional water use survey program provided businesses with site-specific water use assessments and cost-effective conservation project recommendations. This survey program was funded by the California DWR.

Other on-going commercial/industrial programs include offering rebates on high-efficiency commercial clothes washers and a program to provide new ULFTs to county businesses. The District also co-funds the WET (Water Efficient Technologies) Program, along with the City of San Jose, which offers rebates to commercial and industrial water customers for the implementation of process and equipment changes that reduce water needs and wastewater discharges.

In late FY 2001–02, the Water Use Efficiency Unit started a program that will calculate water budgets for large landscape sites and land area for different crops. The District, utilizing multi-spectral images and different classification methods has calculated the square footage of irrigated landscape for approximately 50,000 irrigation-only and mixed-use commercial accounts that are distributed over a 900 square-mile area. We are now in the process of entering this data into a web-based database which will then calculate a site specific water-use budget. The database (which will be accessible to property owners, managers, landscapers, and water agencies) will include both a table and graph comparing a recommended amount versus what the site is actually using. The District has been awarded $406,000 in CALFED grant funding from the California DWR to help fund this project.

The Water Use Efficiency Unit began working in FY 2002–03 with various committees and organizations, such as the Landscape Advisory Committee, Native Plant Society, Master Gardener, and the Farm Bureau to launch several new water conservation programs:

- The District is coordinating with Garden Soft Software to develop the residential water-wise gardening program. The program will provide residents of Santa Clara County with residential landscape self audit information as well as a plant database specifically designed to be unique to the District's service area. The project is scheduled to be completed in Spring 2004.
- The Evapotranspiration (ET) Controller Pilot Program for both residential and commercial properties is currently underway. The target participants will be the top 20% of residential/small commercial water consumers and will be used to determine the amount of outdoor water savings that can occur with the use of ET Controller technology. The program began in June 2003.
- The District is also undertaking a Water Wise Demonstration Garden Project. Currently in the design phase, the goal of the demonstration garden is to develop a unique, one-of-a-kind, demonstration garden that promotes water use efficiency in landscaping. The garden will be an educational resource, test facility, and learning center providing environmentally sound and cost-effective landscaping alternatives. The primary purpose of the garden is to educate the general public on the use of water wise plants while promoting efficient irrigation technologies and recycled water.
- In FY 2003–04, the Water Use Efficiency Unit launched a new program – the High Efficiency Toilet Rebate (HET) Program. This program provides a financial incentive of $125 for single homes and multi-family complexes for the purchase of toilets which flush less than 1.4 gallons per flush. HETs are an emerging technology which has a great potential for water savings. Single family residences can replace up to 3 non-ultra low flush toilets (toilets which flush more than 1.6 gallons per flush) while multi-family complexes are only limited by the number of non-ULFTs they currently have.

Water Use Efficiency: Water Recycling and Desalination

The amount of recycled water used in Santa Clara County during calendar year 2003 was just under 8,800 AF. This performance shows an increasing trend from past years. The District expects this trend to continue through 2004. Recycled water accounted for 2.3% of the total county-wide water used in year 2003. The District's Board policy aims for recycled water to be 5% of total water use in the year 2010.

The IWRP also identifies desalination as a building block in the District's long-term future water supply portfolio. The District anticipates meeting the IWRP target to desalinate 10 million gallons per day in the future, by continuing the direction undertaken through our projects, joint-partnerships and studies.

Projects

The Water District is participating in the planning, design and construction of recycled water facilities in Silicon Valley. Among these are:

- **Silver Creek Pipeline –** As part of an agreement with the City of San Jose, the District is funding up to $6 million (25% of cost) for the construction of the Silver Creek pipeline, which will begin providing three million gallons of recycled water a day from the San Jose/Santa Clara WWTP to the Metcalf Energy Center in 2005 and potentially to other customers along this pipeline alignment.
- **South County Recycled Water Master Plan –** The District and the South County Recycled Water Authority (SCRWA) is also developing a Recycled Water Master Plan and other system improvements in the South County recycled water system.
- **Rebates –** The District is helping the cities (San Jose and Sunnyvale) in production and expansion of recycled water within the County through a rebate and cost-sharing program with South Bay Recycling and South County Regional Wastewater Authority that pays $115/AF for recycled water used to offset District potable supplies.

Studies

The Santa Clara Valley Water District is conducting studies and research investigating the potential and implications of recycled water usage. The District is also investigating the feasibility of brackish desalination in this county. Among the studies being undertaken are:

- **Advanced Recycled Water Treatment Feasibility** – This study is to identify potential new uses for recycled water and to determine which treatment level allows the most flexibility and makes the most economic sense. For example, irrigation of sport fields may require less treatment than indirect potable uses like groundwater recharge. The study will also examine the need for advanced treatments, such as reverse osmosis and microfiltration, to improve the quality of recycled water and minimize any impact it might have on groundwater quality if recycled water is applied to certain sensitive groundwater regions in this county. This study will be completed by June 2004.
- **Desalination –** Beginning in 2003, the District with East Bay Municipal Utility District, Contra Costa Water District and San Francisco Public Utility Commission is undertaking a project to analyze the feasibility of a regional desalination facility. Desalinated water could be used as a long-term water supply, an emergency supply, an intermittent supply during periods of maintenance for the various water agencies in the San Francisco region.
- **Impact of Recycled Water on Soils and Groundwater** - A study on geochemical reactions between recycled water and soil minerals investigated the impacts of recycled water on soils in the county.
- **Groundwater Monitoring** - The Water District has developed a groundwater monitoring network to detect any changes in groundwater quality in areas using recycled water. Groundwater monitoring is on-going.
- **Water Softener Pilot Project** – The study is designed to assess the types of outreach programs and incentive offers that are necessary to persuade customers to use more efficient water-softening technology, to reduce the amount of salt these systems add to recycled water.
- **Characterizing Salinity Contributions in Sewer Collection and Reclaimed Water Distribution Systems to Develop Salinity Management Strategies** - The study will identify sources of salinity in sewer collection systems and develop management strategies to control salinity levels of recycled water.
- **Industrial Application of Recycled Water –** The District,is studying innovative uses of recycled water at a chip manufacturing facility that could be a showcase project for other industrial water users. The notice to proceed for this project was reissued to Applied Materials, Inc. in late June 2004. Applied

Materials was selected because they were a large semiconductor equipment manufacturer who was willing to lend their facilities for innovative testing of their manufacturing process using recycled water and share costs.

- **Streamflow Augmentation Research using Recycled Water –** The District, as a subcontractor to MWD has secured DWR funds that will account for 50% of the total project costs to study use of advanced treated tertiary recycled water for stream flow augmentation.
- **Feasibility of Brackish Desalination –** The District, as a subcontractor to MWD has secured DWR funds that will account for 50% of the total project costs to study the feasibility of brackish groundwater treatment for future reuse.
- **Electo-dialysis Reversal/Reverse Osmosis Pilot Work –** The District, as a subcontractor to MWD has secured California Energy Commission Funds ($50,000) and is currently performing a joint study with the City of San Jose (using an additional $63,678 of District funds) to analyze Electro-dialysis Reversal/Reverse Osmosis Pilot work in recycled water treatment. The City also obtained grant funds for this project for the WateReuse Association and US Bureau of Reclamation. The total cost for this joint project is over $300,000.

WATER QUALITY PROTECTION

In addition to augmenting water supply, the District is responsible for protecting surface and groundwater resources for use in the County. Water quality programs include: (1) treating local and imported surface water for sale to retailers, (2) protecting surface and groundwater resources from contamination, and (3) participating in a CALFED-sponsored Bay Area Regional Blending/Exchange Study to investigate opportunities for water quality improvements through partnership in regional facilities or exchanges. Water treatment is necessary to ensure that the water the District provides meets or exceeds all federal and state drinking water standards. Resource quality protection has numerous aspects that are discussed below.

Treated Water Operations

The District owns and operates three water treatment plants: Santa Teresa Water Treatment Plant (STWTP), Rinconada Water Treatment Plant (RWTP), and Penitencia Water Treatment Plant (PWTP), which provide high-quality treated water to the residences and businesses in Santa Clara County. The treatment plants utilize conventional treatment process of flocculation, sedimentation, filtration, and disinfection to provide high-quality water. The treatment plants are in the process of adding advanced treatment technologies, including ozone as the primary disinfectant, in order to continue ensuring high-quality drinking water that meets drinking water standards.

To better protect public health, the District made changes to its chloramination practices in order to optimize chloramination to reduce distribution system nitrification potential and to provide a stronger and longer lasting disinfectant residual throughout the distribution system. The changes made in 2003 involved reducing the ammonia-to-chlorine ratio and increasing the chloramines residual leaving its treatment plants to 2.2 milligrams per liter. These changes were based on recent studies indicating this as a primary means to optimize chlorimination.

Reflecting its commitment to provide the highest quality water possible, the District was among the first water utilities nationwide to join the Partnership for Safe Water in 1995 (Partnership). The Partnership is a voluntary program developed cooperatively by the United States EPA, the American Water Works Association, the Association of State Drinking Water Administrators, and several other national drinking water industry organizations. The purpose of the program is to further reduce the potential risks to consumers from microbial contaminants such as cryptosporidium and giardia. The District has consistently surpassed the Partnership's goal for filtered water turbidity, a critical indicator of plant performance.

Capital Improvements at the Water Treatment Plants

Stage 2 of the water treatment plant process upgrades will further reduce the levels of disinfection by-products and potential for microbial contaminants in treated water and to further improve water quality. This will include switching to ozonation as the primary disinfection method instead of chlorination and installing filter-to-waste and washwater clarification facilities. The Stage 2 work also includes structural modifications to improve treatment plant reliability during seismic events and process additions to increase treatment capacity at Rinconada to meet projected future demands. Construction of the $253 million capital improvement project began at Santa Teresa in September 2002 and at Penitencia in December 2002. Construction at Rinconada is scheduled to begin in March 2006, with construction completed in 2010.

To complement these new treatment efforts, the District also is planning a new Water Quality Laboratory. The facility will replace the 30-year old Rinconada Laboratory and will more reliably and cost-effectively monitor the quality of our water supplies. Construction is scheduled to begin in 2005.

Resource Protection

Preserving the quality of water supplies is more cost-effective than treating contaminated or degraded water. Pursuant to the District's mission to provide high-quality water to the County, the District continually addresses water quality problems that threaten the delivery of safe, reliable, high-quality water. This is to ensure that water delivered to the District's retailers meets or exceeds all state and federal drinking water regulations. The District also responds to unforeseen water quality issues and acts to ensure the continued ability to deliver high-quality water.

The following subsections describe the District's activities to protect groundwater and surface water that are included in programs such as Water Quality and Reservoir Watershed Management, Groundwater Management, Well Ordinance Program, the Groundwater Cleanup Oversight Program, and Water Quality Special Studies. All these are directed at protecting the quality of the County's sources of water.

Nitrate Management

One threat to groundwater supplies is nitrate contamination. High nitrate concentrations in drinking water can cause health problems in infants less than six months of age. Nitrate contamination is a particular concern in the southern portion of the County, but increased concentrations of nitrate have also been reported in parts of the North County. The District has identified the main sources of nitrate in the South County area as fertilizer applications, septic systems, and animal enclosures. The District has designed a Nitrate Management Program to monitor nitrate occurrence, reduce nitrate exposure, and reduce nitrate loading throughout Santa Clara County.

To monitor nitrate occurrence, the District has established a network of more than 60 wells throughout the South County study area to assess long-term trends. The District also analyzes the nitrate levels reported by public water suppliers throughout the County to supplement the data collected by the District. The District is completing a detailed analysis of the North County nitrate data to determine if there are regional concentration trends that might be of concern. The data indicates that, since the mid-1980's, nitrate concentrations appear to be declining in the Santa Clara Valley subbasin.

To reduce exposure to nitrate, the District offers a free nitrate analysis to all private water supply well users. Since 1998, more than 600 tests have been conducted. More than half the wells tested have exceeded the maximum contaminant level of 45 milligrams per liter of nitrate. Test recipients are given a copy of the results along with a fact sheet detailing what nitrate is, where it comes from, what the health risks are, how to remove nitrate using point of use treatment systems and how to prevent further contamination.

To reduce nitrate loading, the District has launched a public education program in conjunction with the University of California Cooperative Extension, Department of Agriculture, Farm Bureau and Natural Resource Conservation Service.

In Spring 2002, a series of workshops were conducted to provide property owners with the tools they need to evaluate how their properties are affecting local natural resources, especially water resources. The workshop series was repeated in 2002 and 2003.

The District will continue working with the Santa Clara County Department of Environmental Health (County Health) to communicate information to owners on septic systems operation and maintenance. The District and County Health prepared a Well Owner's Guide that was mailed to more than 3,000 well owners in the county. Staff participated in the stakeholder group for preparing statewide regulations for groundwater protection from onsite wastewater treatment systems.

The District provides free infield technical assistance on nutrient and irrigation management to growers through the In-field Nutrient Assessment Assistance Program (INAAP). To increase participation in the program, beginning in FY 2003-04, the District offered a discount to eligible growers who participate. This program directly addresses water and fertilizer user efficiency, their inter-relationships, and groundwater protection. In one year, three of the ranches that participated in the program reduced fertilizer applications by 60 to 100 pounds per acre.

Perchlorate

In late 2002, perchlorate, a chemical used in the manufacturing of rocket fuel, road flares, and fireworks, emerged as a significant contaminant in our South County groundwater basins. The Olin Case in Morgan Hill has now affected over 859 water supply wells in the unincorporated area of Santa Clara County known as San Martin, as well as Morgan Hill and Gilroy, with 552 wells. The Central Coast RWQCB is providing regulatory oversight of the Olin Case and is directing the investigation and cleanup for perchlorate contamination in the San Martin area.

Significant concerns remain regarding this community's exposure to perchlorate in their drinking water and perchlorate accumulation in agricultural crops and livestock. A drinking water standard for perchlorate has not yet been developed, but perchlorate can affect thyroid function and development in fetuses and children. The advisory drinking water action level has been raised from 4 parts per billion to 6 parts per billion by the California Department of Health Services. The Water District initiated a free private well water testing program for residents in the San Martin area in January 2003. The testing program responds to public concerns of water quality following the detection of perchlorate in a nine and one-half mile long area of the Llagas groundwater subbasin. The District collected 1,060 samples between January and June of 2003. Perchlorate was detected in more than one-third of the samples.

Staff is continuing to support the Central Coast Regional Board's regulatory effort by providing groundwater data and information, technical assistance on investigation and cleanup oversight efforts, and logistical and technical support for Perchlorate Community Advisory Group meetings. In addition, staff is working closely with the Regional Board, County of Santa Clara, and the Cities of Morgan Hill and Gilroy to produce a comprehensive long-term corrective action plan that meets all of the community's interests for water supply and groundwater cleanup.

Federal FY 2003–04 appropriations of $1.75 million are earmarked for perchlorate clean up in Santa Clara County. The District is expected to receive $1 million for perchlorate groundwater clean-up under U.S. Environmental Protection Agency's (EPA's) State and Tribal Assistance Grants (STAG) and $750,000 for groundwater remediation under EPA's Environmental Programs and Management (EPM) account. The STAG program requires a 45 percent recipient match; the EPM program does not require a recipient match. The FY 2003–04 funding will be used to further District efforts to restore clean water supplies to local families whose wells are affected by perchlorate. District staff is working with EPA staff to identify and determine eligibility for different projects. Potential projects, which would need to be approved by the District Board of Directors and EPA, could include a point-of-use drinking water treatment system installation program, residential wellhead treatment pilot studies, and well installation to provide design criteria for a remediation system.

Groundwater Guardian

The District has been designated as a Groundwater Guardian by the Groundwater Foundation based on our groundwater protection efforts. The Groundwater Foundation is a nationally recognized, private, non-profit, educational organization dedicated to protecting groundwater resources from contamination and over-drafting. As a Groundwater Guardian, we plan to develop and support community outreach and protection efforts, educational materials and provide technical assistance for groundwater protection activities. The District is working with the Perchlorate Community Advisory Group to form a Groundwater Guardian Community.

Underground Storage Tank Fuel Cleanup Program

The District's Groundwater Cleanup Oversight Programs Unit is responsible for the Leaking Underground Storage Tank Oversight Program (LUSTOP) to oversee the investigation, cleanup, and closure of cases where soil and/or groundwater have been affected by petroleum fuel and additives such as Methyl Tert-Butyl Ether (MTBE) from leaking underground storage tanks (USTs). The District has conducted the Local Oversight Program under contract with the County of Santa Clara and the State Water Resources Control Board since 1988.

More than 2,436 fuel leak cases have been reported in the County, and over 75 percent of these cases have received regulatory closure by the District or other regulatory agencies. To date, 1,763 sites in North County and 81 sites in South County have been closed. The District is currently overseeing 495 sites in North County and 25 sites in South County. The remaining 72 open sites are overseen by the RWQCBs.

The majority of the active cases are associated with releases of gasoline. MTBE, which is a colorless chemical compound added to reformulated gasoline that was developed to reduce smog and meet the goals of the Clean Air Act (CAA), has been detected in shallow groundwater at more than 390 of the active gasoline tank sites. Very few of the active gasoline cases have been associated with water supply well impacts. Those that are, including at least one large public water supply well, one well that supplies a local school district, and several private wells, contain very low concentration levels.

The District has implemented and been involved in several studies of leaking underground storage tank sites to determine if undetected releases are occurring and identify potential weaknesses in fuel storage, management, and delivery operations. The results showed MTBE at 60 percent of the sampled stations. The Regional Board, based on the District's request, expanded previous studies and directed groundwater investigations at un-investigated operating gasoline UST facilities that pose the greatest threat to groundwater resources. Over 150 facilities have been requested to conduct investigations of MTBE presence in groundwater. The project is viewed as a success as many facilities were found to have significant MTBE contamination that would have otherwise remained unknown. One of these gasoline stations was less than 5 years old and was located 250 feet from a large municipal public drinking water well. Prompt shut down of the well has kept this well clean. Sites with evidence of releases were added to the LOP for investigation and cleanup oversight. In late March 1999, the Governor of California ordered a phase-out of the additive in California gasoline by the end of 2002, but subsequently extended the date to December 2003. MTBE has been removed from the gasoline supply in California, but the legacy of contamination from past releases from leaking underground gasoline storage tanks is a continuing threat to groundwater quality.

The District prioritizes fuel leak cases that pose the greatest risk to the groundwater basin and ensures that immediate action is taken to address the sites which have the greatest potential for contamination of the water wells and vulnerable portions of the groundwater basin. Due to the number of closures, successful cleanup, and phase out of MtBE from gasoline in California by December 2003, most of the remaining open cases are relatively low risk compared to other groundwater contaminant issues. As a consequence of state legislation, the District will be transitioning the fuel leak oversight to the County of Santa Clara. This transition will occur over FY 2004–05, and will allow the District more flexibility in allocating resources to high priority groundwater contaminant issues and other emerging concerns.

Solvents and Toxics Liaison Program

The District's Groundwater Cleanup Oversight Programs Unit provides peer review and regulatory liaison on solvents, toxics, perchlorate, and other contamination cases that threaten groundwater quality. Activities that use chlorinated solvents and recalcitrant toxic chemicals can pose a significant threat to the groundwater basin and many of these activities have resulted in releases to soil and groundwater. The large number of electronics manufacturing plants, together with heavy industry and military facilities in Santa Clara County, has resulted in over 600 solvents and toxics releases that have affected the groundwater. The District provides peer review and tracks the progress of these sites to ensure that water resources are protected.

The District is also performing an evaluation of the effects of releases of perchloroethelyne (PCE) from dry cleaners and other facilities that use PCE and has identified more than 600 former locations of dry cleaning operations that have operated in the last sixty years, in addition to the 220 active dry cleaning plants in Santa Clara County. District staff will be requesting the Regional Boards to ensure that possible PCE contamination associated with these operations are investigated.

The Solvents and Toxics Liaison Program is active on the Olin Case in Morgan Hill (see "Resource Management"), in addition to another large perchlorate case, the Pratt & Whitney solid rocket motor plant on Metcalf Road, also known as UTC. Working in close coordination with the Water Quality Unit, staff have studied the effectiveness of UTC's cleanup efforts and their ability to prevent migration of perchlorate into District facilities located downstream. Through technical comment letters and independent verification sampling, staff have caused RWQCB to require much more stringent management of stormwater and passive discharge of perchlorate-contaminated groundwater into streams. Staff were instrumental in forcing more than a half million dollars of new remedial action work last year including construction of a small dam to prevent runoff of perchlorate laden stormwater following a large explosion at a propellant mixing station. RWQCB has agreed to adopt the District's proposed monitoring requirements into a new Site Cleanup Order.

The Solvents and Toxics Liaison Program participates in the Moffett Field Restoration Advisory Board, attending public meetings on a regular basis, leveraging the District's technical knowledge of the groundwater basin to verify the potential effectiveness of the Navy's and US EPA's plans for site remediation.

Well Ordinance Program

The District protects the quality and quantity of the County's groundwater resources by ensuring that all wells in the County are constructed, maintained, modified, and destroyed in compliance with the District Well

Ordinance and the State Well Standards.

The Well Ordinance program includes permitting, tracking, inspecting, and violation enforcement of all wells in the County. The program also assists the public in destroying abandoned wells and maintains District-owned wells. During FY 2003–04, the District:

- Permitted 2,000 wells and other deep excavations for construction or destruction
- Inspected 1,694 wells and other deep excavations constructed or destroyed
- Registered 823 new wells

HAZMAT Emergency Response Program

To prevent or limit contamination of the County's water supply from hazardous material (HAZMAT) releases, the District Incident Response staff can manage investigations, conduct sampling and analysis, direct clean up, and disposal of suspected or known hazardous materials dumped or spilled in the vicinity of reservoirs, recharge ponds, rivers, creeks and other District jurisdiction interests.

Urban Runoff Program

The District Urban Runoff Program is composed of a small group of staff dedicated to the training of staff and conducting outreach efforts to facilitate the improvement of the quality of stream water quality in the Santa Clara County. The District is a member of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). The programs provide training, outreach and monitoring to ensure the improvement of the quality of storm water that flows into streams of the Santa Clara Valley and the San Francisco Bay. The District participates in the SCVURPPP program as 1 of 15 co-permittees under a single Municipal Storm Water Permit from the San Francisco Bay RWQCB. Additionally, the District, under its Clean, Safe Creeks Plan is extending these storm water pollution prevention efforts into south Santa Clara County. Combining efforts with other local agencies for this permit has greatly improved the performance and efficiency of the Urban Runoff Program.

CAPITAL IMPROVEMENTS

Project management and engineering services for planning, design and construction of the District's capital projects are provided by the Capital Program Services Division. The Division is also responsible for the development, management, monitoring and tracking of the District's Capital Improvement Plan (CIP). This plan is intended to identify and plan for the District's 10-year capital improvement spending, the sources to fund the long term plan, and the staffing level to execute the long-term plan.

Some major water utility capital improvement projects currently in progress include Almaden Dam Outlet Works, Lenihan Dam Outlet Modification, Water Treatment Improvement Projects Stage 2, and New Water Quality Laboratory. The objectives of these projects are as follows:

- The Almaden Dam Outlet Works Project will investigate and restore the integrity of the outlet works facility to preserve the operating functions of Almaden Dam and comply with California Division of Safety of Dams (DSOD) regulatory requirements. Silt level in the reservoir is approaching the top of the intake tower. In addition, the existing intake structure does not meet current and seismic standards. The project is in planning phase and is currently scheduled to be advertised for construction in October 2006. The estimated total project cost is $7.5 million.
- The Lenihan Dam Outlet Modification Project will develop and implement a solution to the outlet pipe

collapse problems so the District can continue to safely and reliably release water through the outlet works and remove operational restrictions imposed by DSOD. The project is currently in planning phase and is scheduled to be advertised for construction in FY 2006–07. The estimated total project cost is $23.5 million.

- The Water Treatment Improvement Projects Stage 2 provides planning, design and construction of improvements at PWTP, STWTP, and RWTP. The improvements ensure District's treated water quality meet or exceed all applicable regulations, and improve the reliability of the three treatment plants. The Penitencia and Santa Teresa plants are currently under construction, and Rinconada plant is scheduled to start construction in the March of 2006. The estimated total project cost is $253 million.

- The New Water Quality Laboratory Project will plan, design, and construct a laboratory that is in compliance with EPA guidelines and other applicable standards, and meets the projected needs of the District for at least a 10-year horizon. Construction could commence in 2004. The estimated total project cost is $13.4 million.

Development of the Asset Management Program Plan was started in January 2002 to provide a better basis for identifying long-term capital rehabilitation and replacement needs. This program's goal is to lower the cost of asset ownership and improve system reliability by establishing a life-cycle preventative and corrective maintenance schedule for each of the District's assets. The plan that will be generated from this effort will identify projects similar in nature to the Almaden Dam Outlet, Lenihan Dam Outlet Modifications, Almaden Calero Canal, and Rinconada Reservoir Roof Rehabilitation. The initial program plan was completed in September 2003.

Table 3-1 shows the funding for capital projects for FY 2003–04 and planned funding for the next five fiscal years. The cumulative investment between FY 2004–05 and FY 2008–09 is projected to be approximately $330 million (constant 2004 dollars).

TABLE 3-1
Capital Improvement Projects —Fiscal Years 2003–04 Through 2008–09

(Thousands of Constant 2004 Dollars)

	03/04 Adjusted Budget	04/05 Approved Budget	05/06 Projection	06/07 Projection	07/08 Projection	08/09 Projection
SOURCE OF SUPPLY						
Flashboard Dam Improvement	780	5,080	620	475	569	-
Almaden Dam Instrumentation	110	255	1,674	1,109	1,305	-
Dam Seepage	458	248	890	-	-	-
Geodetic Control Mainten Prog	238	16	-	-	-	-
Recycle Wtr PL Rehab Cord/SCRW	85	-	-	-	-	-
San Tomas Wellfield	609	58	-	-	-	-
Water Banking (Capital)	1,577	5,101	2,896	4,955	4,326	2,874
Silver Creek Pipeline	7,375	40	-	-	-	-
Advanced Recycled Water Treatment Facility	723	234	-	-	-	-
San Luis Reservoir Lowpoint	3,495	2,952	-	-	-	-
Santa Clara Tunnel Landslide	383	50	-	-	-	-
Vasona Pump Station, Chemical Feed	73	36	-	-	-	-
Water Infrastructure Reliability Program	370	34	-	-	-	-
Almaden Dam Outlet	-	4,537	341	-	-	-
Jacques Gulch Restoration	178	937	85	85	85	-
Anderson Reservoir Bank Erosion	197	335	3,666	-	-	-
Fellow's Dike Rehabilitation	4,217	777	-	-	-	-
Lenihan Dam Outlet Mods	1,835	1,472	16,440	360	-	-
Pacheco Pumping Plant ASD Replace	653	1,848	2,456	2,267	2,306	734
Capital Placeholder	-	-	-	5,000	7,500	7,500
Guadalupe Dam Outlet Works Rehabilitation	-	-	-	-	-	239
Calero Dam Outlet Works Rehabilitation	-	-	-	-	-	139
Pachecho Fiber Optic Cable Replace	-	-	-	-	-	240
San Felipe 2002 Inspection Follow-up	-	-	-	-	-	409
South County Pipeline Right of Way	-	-	-	-	-	230
Pacheco Conduit Bifurcation Dewater	-	-	-	-	-	284
SC Tunnel Leakage Control	-	-	-	180	40	-
Subtotal	**23,357**	**24,009**	**29,068**	**14,431**	**16,131**	**12,649**
RAW WATER TRANSMISSION & DISTRIBUTION						
Central Pipeline Rehab	102	497	2,332	-	-	-
Vasona Restroom Modification	216	100	-	-	-	-
Vasona Pumping Plant Electrical	197	437	-	-	-	-
Raw Water Control System	959	30	-	-	-	-
Stream Flow Alert Upgrade Project	87	346	-	-	-	-
Kirk Ditch	974	71	-	-	-	-
Almaden Calero Canal	-	1,565	270	-	-	-
San Pedro Recharge Facility	13	40	-	155	313	22
Capital Placeholder	-	-	-	1,500	2,250	2,250
Valve 906 Low Flow Bypass	-	-	-	106	20	-
Vasona Pumping Plant Long Term	-	-	-	279	157	2,967
Church Ave Diversion	-	-	227	407	846	411
Coyote PP Adj Speed Drive Replacement	-	-	-	318	351	445
Stevens Creek @ Evelyn Ave (FAHCE)	-	-	846	684	1,008	-
Stevens Creek @ Moffett Ave (FAHCE)	-	-	662	662	1,233	-
Stevens Creek @ Fremont Ave (FAHCE)	-	-	576	576	576	2,619
Subtotal	**2,547**	**3,085**	**4,913**	**4,687**	**6,754**	**8,714**
WATER TREATMENT						
SCADA Software/PLC Upgrade, WT Plants	1,140	1,194	-	-	-	-
PW TP Treatment Improv Stage 2	19,052	15,645	7,134	-	-	-
Various Penitencia Water Treatment Projects	2,500	4,286	506	-	421	505
STW TP Treatment Improv Stage 2	9,945	14,697	1,803	50	-	-
Various Santa Teresa Water Treatment Projs	1,367	240	-	338	-	-
RW TP Treatment Improv Stage 2	4,941	4,009	-	28,457	39,630	17,140
Various Rinconada Water Treatment Projs	6,186	933	217	2,652	4,158	3,400
New Water Quality Laboratory	3,568	262	-	-	-	-
Treatment Plant Filter Backwash Aid	-	-	173	200	580	500
Discharge Valves Actuator Replacement	-	-	-	88	-	-
TP Electrical and Control Systems Improvement	-	-	90	200	220	880
Visual Screening at Water Treatment Plants	143	761	-	-	-	-
Telephones at Water Treatment Plants & Vasosna	80	1,154	-	-	-	-
Capital Placeholder	-	-	-	1,500	2,250	2,250
Subtotal	**48,921**	**43,180**	**9,923**	**33,485**	**47,259**	**24,675**
TREATED WATER TRANSMISSION & DISTRIBUTION						
Treated Wtr T&D Inst Upgrade	364	12	-	-	-	-
Security Improvement	379	750	4,452	-	-	-
Treated Water Distribution Flow Meter	179	350	123	25	-	-
DHS Compliance, Treated Water System	310	1,298	3,152	601	-	-
PW TP Del Main Modulating Valve	138	22	-	-	-	-
Rinconada Res Roof Rehab	2,630	164	-	-	-	-
Snell Pipeline Cathodic Prot	12	-	-	-	-	-
Capital Placeholder	-	-	-	2,000	3,000	3,000
West Side Distribution System Study	-	-	-	-	300	200
West Pipeline	-	-	-	-	-	285
Parallel East Pipeline Tie-in	-	-	-	-	167	527
Milpitas PL Terminus Valve & Vault	-	-	90	100	144	710
Subtotal	**4,012**	**2,595**	**7,817**	**2,726**	**3,611**	**4,722**
ADMINISTRATION & GENERAL						
Capital Programs Services Division Admin	1,788	3,269	5,772	2,960	3,848	3,848
Technical Services Support	-	772	1,560	800	1,040	1,040
ISMP	738	726	-	-	-	-
Subtotal	**2,526**	**4,768**	**7,332**	**3,760**	**4,888**	**4,888**
TOTAL	**81,363**	**77,636**	**59,052**	**59,089**	**78,643**	**55,648**

IV. FINANCIAL OUTLOOK FOR THE WATER UTILITY ENTERPRISE

INTRODUCTION

The purpose of this section is to describe the short-term and long-term financial requirements for achieving the Board's Ends Policies and to present a funding approach. Section I reported the adopted rates for FY 2004–05. Section IV describes the multi-year financial analysis and the funding approach that serves as the foundation for the recommended rates in each zone. The proposed funding includes a series of increases in water rates in each zone for the next ten years, combined with additional debt financing. Appendix B describes the Water Utility revenue sources, cost centers, and reserves as well as Board policy regarding finances.

The Water Utility's revenue requirements remained relatively stable for the period from 1993 to 1998 and rates were held constant. In 1998, the utility made the first of a series of capital investments required to comply with new water quality regulations. Concurrently, the District faced higher costs for its water purchased from the Bureau of Reclamation. Consequently, the District embarked on a series of rate increases that saw the M&I groundwater rate in North County increase from $240 per AF in FY 1997–98 to $390 per AF in FY 2004–05.

The current outlook is for continued rate increases to cover steep increases in the cost of federal water, rising water treatment costs as a result of the conversion to ozone as a primary disinfectant, and rising debt service costs associated with capital investments. Section III, describes the continuing water utility programs and other issues that require additional funds for both capital and operating outlays. Projections of the capital and operating costs indicate that wholesale water rates will need to increase in the next several years, as the utility invests over $366 million (inflated dollars) in capital improvements from fiscal years 2004–05 to 2008–09.

The financial outlook includes a cost "placeholder" beginning in FY 2006–07 for projects in various stages of planning. Preliminary cost estimates for asset management, IWRP, and the San Luis Lowpoint projects can be absorbed within this placeholder. The placeholder has additional capacity in some years to partially fund other projects that are not in the financial outlook. The projects include proposed solutions to the Bay-Delta water quality problems, further investments in water banking or infrastructure reliability, possible construction of an advanced water treatment facility, partnerships with San Francisco Public Utility Commission (SFPUC), or potential District investments in future recycled water facilities as part of recycled water master planning. These and other items are in the planning stages and include a wide range of potential program costs and facility investments. Consequently, there is a high degree of uncertainty regarding the District's role and its share of future costs. Moreover, in several cases, there is no clear demand among our customers for the District to invest in these ventures.

REVIEW OF DISTRICT'S FINANCES FOR FISCAL YEARS 2002–03, 2003–04, AND 2004–05

The District's financial plans are designed to carry out the direction of the Board's Ends Policies on water supply and quality. Some of the major increases in the FY 2004–05 budget reflect the higher cost to maintain or upgrade the District's aging facilities to enable better operations under increasingly stringent public health and environmental requirements.

Table 4-1 shows the revenue requirements that are the basis for the adopted rates, breaking out operations, water purchases, extraordinary items, and capital for fiscal years 2002–03 through 2004–05. The net requirements are the revenues that must be available from water sales, property taxes, and other sources after using debt financing and allowing for funds added to, or used from reserves. Reserves provide a balancing mechanism to smooth fluctuations in the level of revenue that must be raised from water sales in a single year. Appendix B gives a description of each of the Water Utility Reserve Funds.

TABLE 4-1
Overview of Water Utility Revenue Requirements
($ Millions)

Revenue Requirements	Actual 2002–03	Est. Actual 2003–04	Adopted Budget 2004–05
Operations	72.3	82.4	81.2
Debt Service	14.7	11.9	8.0
Water Purchases			
Federal Water	15.8	11.2	17.9
State Water	10.3	14.4	17.8
Extraordinary Items (Includes Advances, Repayments and Transfers)	5.8	(0.8)	(1.2)
Capital Projects (Includes ISMP and CPSD Admin)	91.5	81.4	77.6
TOTAL REQUIREMENTS	**210.4**	**200.5**	201.3
Increase/Decrease in Reserves	(35.9)	(19.9)	(1.0)
Carryforward Capital Reserves	(45.6)		
Less Revenue Bond Proceeds/ Other Debt	6.0	44.5	48.0
Net Requirements From Water Utility Revenues	**122.9**	**136.1**	**152.3**

Fiscal Year 2002–03

During FY 2002–03, significant operating outlays totaling $27.6 million were made in the following continuing programs:

- $5.1 million for expanded efforts in Water Conservation Program
- $2.8 million for general Water Recycling
- $3.6 million for water banking
- $2.9 million for recharge and raw water field facility maintenance
- $10.6 million for General Operations at the three treatment plants
- $2.6 million for Water District laboratory

Table 4-1 shows extraordinary payments of $0.3 million for the District's Information Systems Program (ISMP) payment, $0.9 million to the General Fund for administrative projects, and a $4.6 million inter-fund loan that will be used to pay for solar project costs. Water purchases totaled $26.1 million and capital projects totaled $91.5 million FY 2002–03. Reserves decreased by approximately $35.9 million to pay for water utility outlay requirements. The Bureau Repayment Appropriation reserve was used to fund capital projects in order to lower borrowing costs.

Fiscal Year 2003–04

Operations requirements for FY 2003–04 are estimated at a $10.1 million increase over actual requirements for FY 2002–03. Planned expansion of specific programs contributes as follows: imported water, $5.0 million; recycled water, $1.5 million; and perchlorate cleanup efforts, $1.2 million. Capital appropriations for this fiscal year total $81.4 million, of which $33.9 million goes to further design and construction efforts at the water treatment plants.

Table 4-1 shows that an estimated $64 million will come from debt and reserves to fund the capital budget for FY 2003–04. Reserves, in the amount of $19.9 million, will be used to minimize borrowing costs.

Fiscal Year 2004–05

For FY 2004–05, projected operations costs are expected to be slightly less compared to FY 2003–04. The cost of water purchased from the federal and state projects continues to be the largest expense item at $17.9 million and $17.8 million, respectively, for this year.

In FY 2004–05, the adjusted capital appropriation is $77.6 million. The largest portion of this estimate is for construction of the Stage 2 improvements at the water treatment plants, and Water Banking.

For FY 2004–05, Table 4-1 shows total requirements of $201.3 million to be met from a combination of current revenues, reserves, and debt. The adopted rates shown in Table 1-1 are anticipated to produce approximately $116.2 million in revenues from water usage. Property taxes are projected to be $21.7 million, and interest earnings and other revenue are projected to be $14.5 million for a total of $152.3 million. The table shows a net decrease in reserves of $1.0 million.

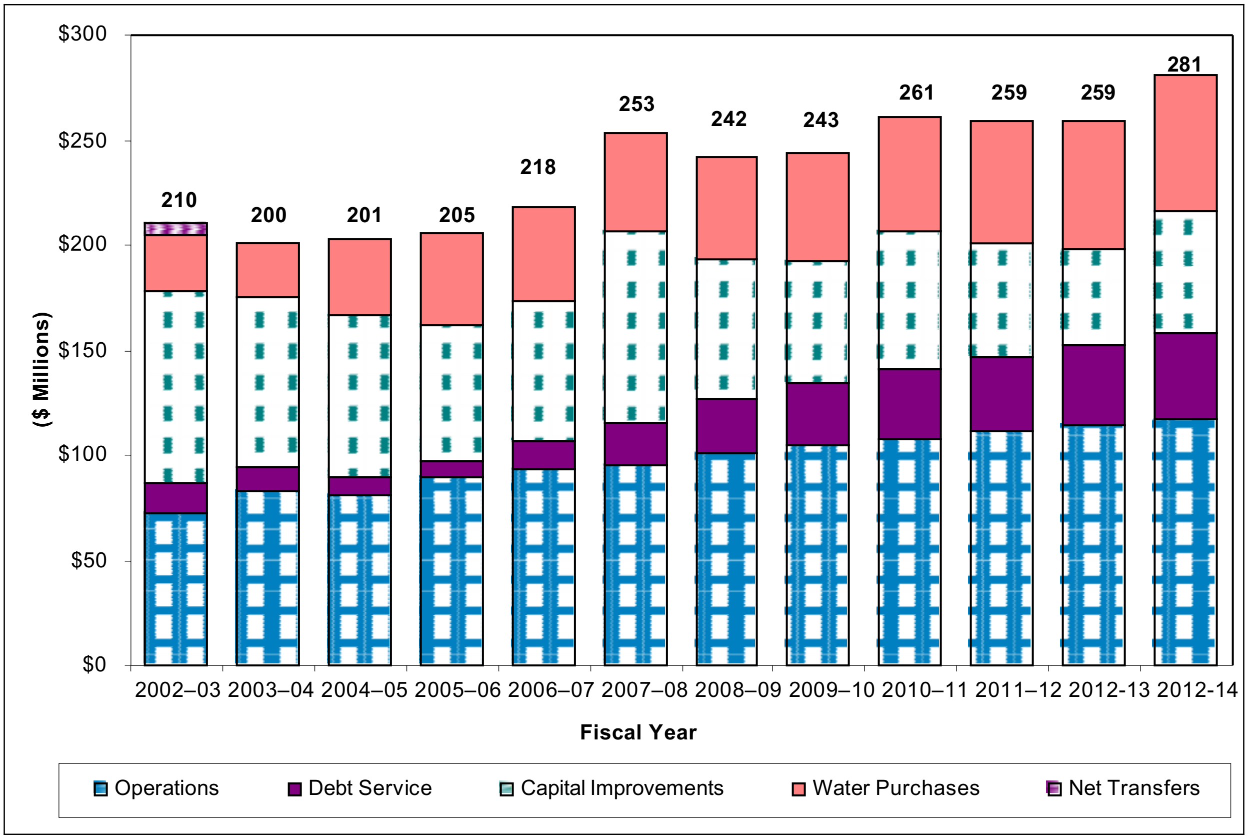
The Water Utility plans to use commercial paper debt to raise $48.0 million in financing for the capital improvement plan. For the next five years, the District will continue to use both reserves and debt in conjunction with increasing water rates to meet revenue requirements occasioned by capital improvements totaling $366 million (in inflated dollars) for the five fiscal years 2004–05 though 2008–09. This funding will be used to upgrade many treatment plant systems that are needed to support the process revisions planned as part of the Stage 2 work.

The Water District received ratings of P-1 and A-1+ from Moody's and Standard & Poor's respectively on the issuance of its commercial paper program in 2003. These ratings reflect the District's strong financial position and the highly rated creditworthiness of District issued securities. The ratings are either the highest or among the highest for a water-related governmental entity in the State of California, which helps keep interest costs borne by the District at a minimum.

OVERVIEW OF LONG-TERM CAPITAL AND OPERATING PLANS

To develop a rate structure that will support planned work, staff analyzes the immediate needs of the District as well as anticipated requirements in the years to come. The projected outlays for the next ten years (see Figure 4-1) include capital and operating costs for the water quality and water supply issues discussed in Section III. The continuing appropriations for the capital investment needed to comply with water quality regulations can be seen in the capital portion of the bars. Large capital appropriations are planned for FY 2004–05 to fund numerous construction contracts planned to begin in that year. As capital appropriations for completion of water treatment improvement projects at Penitencia and Santa Teresa water treatment plants begin to taper off by FY 2006–07, asset management costs are anticipated to grow to replace aging equipment and facilities. Details of the capital improvement projects are shown in Table 3-1.

FIGURE 4-1
Ten-Year Program—Projected Expenditure



The annual operation expenditures are projected to decrease slightly in FY 2004–05 due to District efforts to cut services and supplies to offset increases in imported water costs. Federal water purchase costs are projected to increase significantly as renewal of the CVP contract is negotiated and finalized. Longer term, water treatment costs are projected to increase as the ozonation processes come on line at the completion of the Stage 2 construction.

LONG-TERM FUNDING APPROACH FOR THE WATER UTILITY

The financial plan for the next ten years combines the commercial paper program with current revenues (from water sales), periodic revenue bond sales, reserves, and other sources to satisfy total expenses each year. The immediate challenge is to provide $366 million (in inflated dollars) for capital facilities and equipment between fiscal years 2004–05 and 2008–09; therefore, additional short-term and long-term debt financing is planned each year for future capital improvements. Table 4-2 below shows the funding sources for capital projects in fiscal years 2003–04 through 2008–09.

TABLE 4-2
Capital Improvement Projects Funding Sources
Fiscal Years 2003–04 Through 2008–09

(Millions of Dollars)

Water Utility Capital Improvement Projects $ Millions	03/04 Adjusted Budget	04/05 Adopted Budget	05/06 Projection	06/07 Projection	07/08 Projection	08/09 Projection
Funding Sources						
Current Revenue (i.e., operating income and operating reserves)	25.9	26.8	11.5	8.0	10.3	9.7
Future Year's Capital Reserves	12.7	2.8	-2.5	-1.4	-1.9	-1.4
Borrow/ (Repayment) of CVP Reserves	-1.7	0	0	0	0	0
Revenue Bond Proceeds/ Other Debt	44.5	48.0	55.5	59.9	82.8	58.1
Total Water Utility Capital Improvements Funded (Inflated Dollars)	**81.4**	**77.6**	**64.5**	**66.5**	**91.2**	**66.4**

Figure 4-2 shows the water rate projections that in combination with debt financing will finance needs to FY 2013–14. Over a five-year period, North County M&I rates are projected to increase from $405 per AF in FY 2004–05 to $605 per AF in FY 2009–10, an average increase of 8.3 percent per year. The projected growth in South County M&I rates is from $200 per AF in FY 2004–05 to $360 per AF in FY 2009–10, an average increase of 14.7 percent per year.

Table 4-3 shows the projected revenues, expenditures, and reserves over the next ten years including proceeds from commercial paper and revenue bonds of $48 million dollars in FY 2004–05 and $55.5 million in FY 2005–06. By financing with a combination of debt, current year revenue, and reserves, the District is able to maintain adequate operating reserve levels and lower but prudent capital reserves.

The District will see debt service rise from $8 million in FY 2004–05 to just over $25 million in FY 2008–09. This increase results from anticipated bond and commercial paper issuances. Total outstanding debt (excluding general obligation bonds) is projected to increase from $156 million in FY 2004–05 to $422 million in FY 2008–09.

FIGURE 4-2
Ten-Year Rate Projection

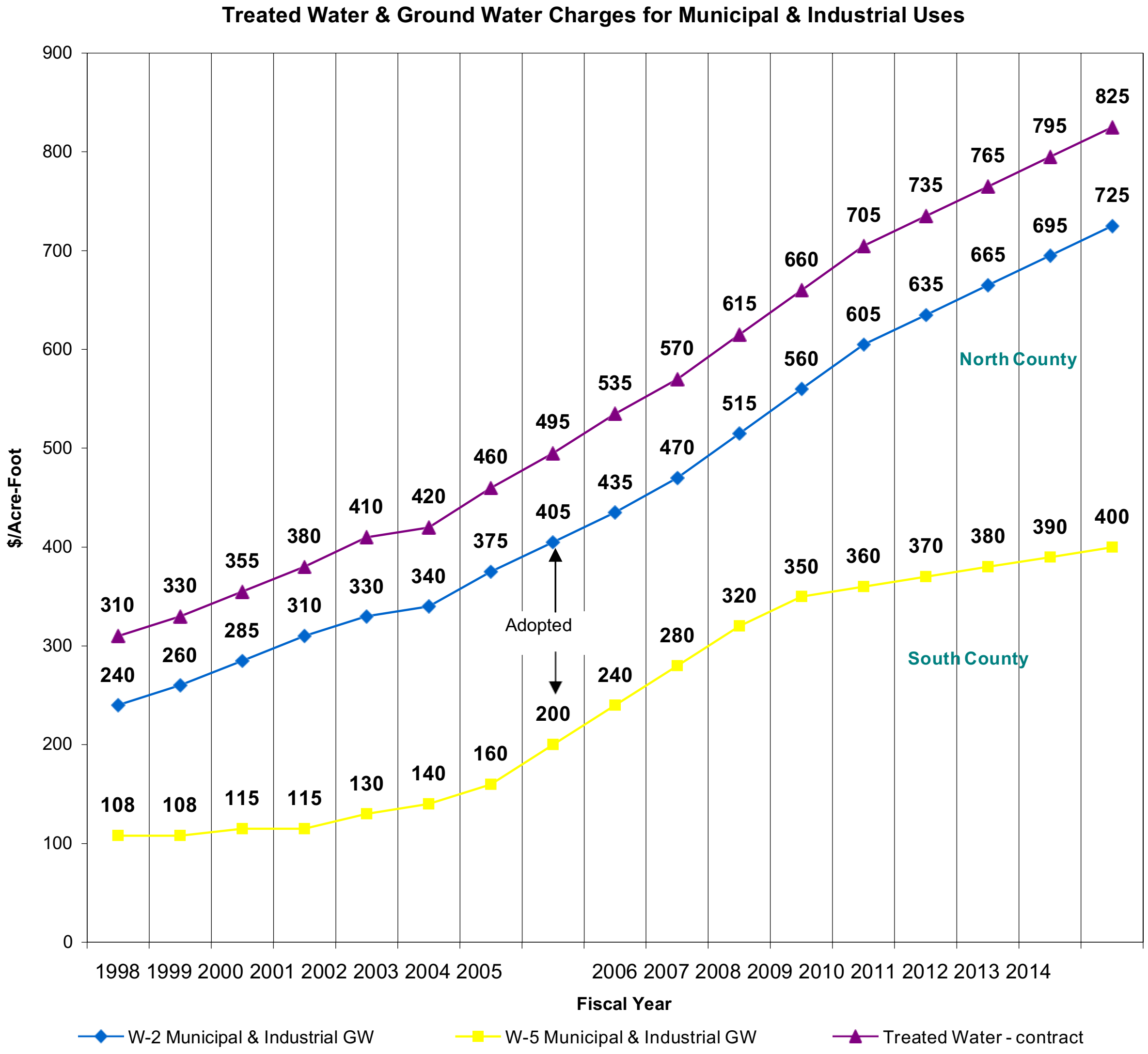


TABLE 4-3
Ten-Year Water Utility Plan

($ in Thousands)

Revenue Sources:	Actual 2001–02	Actual 2002–03	Adjusted Budget 2003–04	Approved Budget 2004–05	Projected 2005–06	Projected 2006–07	Projected 2007–08	Projected 2008–09	Projected 2009–2010	Projected 2010–11	Projected 2011–12	Projected 2012-13	Projected 2013-14
Groundwater Charges	$39,901	$36,004	$46,189	$50,100	$54,942	$60,234	$66,805	$73,295	$78,908	$82,926	$86,585	$90,243	$93,901
Surface/reclaimed Water Sales	$713	$1,540	$854	$937	$1,194	$1,310	$1,447	$1,574	$1,697	$1,792	$1,890	$1,992	$2,057
Treated Water Charges	$53,055	$57,007	$60,493	$65,145	$70,079	$74,730	$80,710	$86,690	$92,670	$96,657	$100,643	$104,630	$108,617
Inter-governmental services	$1,974	$2,220	$400	$1,200	$1,331	$453	$472	$492	$507	$522	$538	$554	$570
Total Operating Revenue	**$95,643**	**$96,771**	**$107,936**	**$117,382**	**$127,546**	**$136,727**	**$149,434**	**$162,051**	**$173,782**	**$181,897**	**$189,656**	**$197,419**	**$205,145**
Non-Operating Income:													
Property Taxes	$13,865	$16,238	$18,542	$21,662	$21,807	$22,109	$22,231	$23,357	$25,488	$26,623	$28,764	$30,909	$33,059
Interest	$12,104	$7,281	$4,741	$2,516	$1,416	$1,524	$1,603	$1,700	$1,777	$1,846	$1,863	$1,834	$1,825
Capital Contributions	$102	$1,505	$4,627	$6,881	$3,450	$0	$0	$0	$0	$0	$0	$0	$0
Other	$9,718	$1,071	$226	$3,898	$289	$289	$289	$289	$289	$289	$289	$289	$289
Total Non-Operating Income	$35,789	$26,096	$28,136	$34,957	$26,962	$23,922	$24,123	$25,346	$27,554	$28,758	$30,916	$33,031	$35,173
Total Revenue	**$131,431**	**$122,867**	**$136,072**	**$152,339**	**$154,508**	**$160,649**	**$173,557**	**$187,397**	**$201,336**	**$210,655**	**$220,572**	**$230,450**	**$240,318**
Operating Outlays:													
Operations	$83,163	$93,534	$101,835	$111,793	$127,984	$133,102	$136,399	$143,819	$147,623	$153,347	$159,224	$165,812	$172,432
Operating Projects	$4,358	$4,816	$6,114	$5,072	$5,570	$5,494	$5,978	$6,396	$8,957	$9,112	$9,272	$9,437	$9,606
Debt Service	$14,929	$14,652	$11,911	$7,986	$7,886	$13,101	$19,941	$25,220	$28,871	$32,519	$35,759	$37,764	$40,317
Total Operating Outlays	**$102,450**	**$113,002**	**$119,859**	**$124,851**	**$141,440**	**$151,698**	**$162,318**	**$175,435**	**$185,451**	**$194,978**	**$204,255**	**$213,013**	**$222,355**
Excess (Deficit) Revenues vs Operating Outlays	$28,982	$9,865	$16,213	$27,488	$13,069	$8,951	$11,239	$11,962	$15,885	$15,677	$16,317	$17,438	$17,964
Unreserved balance beginning of year	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Balance Available for Capital and Reserves	**$28,982**	**$9,865**	**$16,213**	**$27,488**	**$13,069**	**$8,951**	**$11,239**	**$11,962**	**$15,885**	**$15,677**	**$16,317**	**$17,438**	**$17,964**
Total Capital Appropriations	**$56,998**	**$91,496**	**$81,363**	**$77,636**	**$64,528**	**$66,505**	**$91,169**	**$66,447**	**$58,044**	**$65,948**	**$54,501**	**$45,589**	**$58,528**
Other Financing Sources/ (Uses):													
Operating Transfers Out - ISMP	($3,397)	($354)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Operating Transfers Out -other/ CPSD admin	$0	($75)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Operating Transfers Out - Solar Project	$0	($4,600)	$1,279	$1,201	$755	$0	$0	$0	$0	$0	$0	$0	$0
Transfer out - comp absences		($797)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Transfer out - King George		$0	($500)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Operating Transfers out - FAHCE	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Revenue Bond/CP Proceeds	$0	$6,027	$44,500	$48,000	$55,527	$59,930	$82,836	$58,061	$43,733	$53,262	$36,372	$27,972	$40,168
CVP Reserve Transfer to fund capital		$35,000		$0									
Total Other Financing Sources/ (Uses)	**($3,397)**	**$35,201**	**$45,279**	**$49,201**	**$56,282**	**$59,930**	**$82,836**	**$58,061**	**$43,733**	**$53,262**	**$36,372**	**$27,972**	**$40,168**
Budget Balance Available	**(31,413)**	**(46,430)**	**(19,871)**	**(948)**	**4,822**	**2,376**	**2,906**	**3,576**	**1,574**	**2,991**	**(1,812)**	**(180)**	**(396)**
Projected Carryover													
Balance Avaliable	**(31,413)**	**(46,430)**	**(19,871)**	**(948)**	**4,822**	**2,376**	**2,906**	**3,576**	**1,574**	**2,991**	**(1,812)**	**(180)**	**(396)**
Appropriated to/(from) Reserves:													
Operating Reserves:													
Contingency Appropriation	$1,170	$1,170	$1,199	$1,249	$1,414	$1,517	$1,623	$1,754	$1,855	$1,950	$2,043	$2,130	$2,224
Working Capital Appropriation	$9,751	$9,751	$9,988	$10,404	$11,787	$12,641	$13,526	$14,620	$15,454	$16,248	$17,021	$17,751	$18,530
Supplemental Water Supply Appropo.	$3,589	$2,898	$589	$589	$589	$589	$589	$589	$589	$589	$589	$589	$589
Rate Stablization Reserve Fund	$2,000	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000
San Felipe Appropriation	$2,898	$3,031	$2,898	$3,031	$3,031	$3,031	$3,031	$3,031	$3,031	$3,031	$3,031	$3,031	$3,031
Environmental Water Account	$6,921	$6,921	$921	$921	$921	$921	$921	$921	$921	$921	$921	$921	$921
Performance Efficiency	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Operating Reserves	**$26,329**	**$26,772**	**$18,595**	**$19,194**	**$20,742**	**$21,700**	**$22,691**	**$24,915**	**$25,850**	**$26,739**	**$27,605**	**$28,422**	**$29,294**
Capital Reserves:													
Designated for Fixed Assets	$1,729	$2,568	$1,816	$1,816	$1,816	$1,816	$1,816	$1,816	$1,816	$1,816	$1,816	$1,816	$1,816
Designated for Future Years' Capital	$15,542	$17,374	$4,715	$1,907	$4,462	$5,881	$7,795	$9,147	$9,786	$11,888	$9,210	$8,213	$6,945
Total Capital Reserves	**$17,272**	**$19,942**	**$6,531**	**$3,723**	**$6,278**	**$7,697**	**$9,612**	**$10,963**	**$11,602**	**$13,704**	**$11,026**	**$10,029**	**$8,761**
Reserves for Contingent Liabilities:													
PERS Stabilization Reserve	$0	$613	$613	$613	$0	$0	$0	$0	$0	$0	$0	$0	$0
State Impact - ERAF	$0	$0	$0	$1,261	$2,592	$2,592	$2,592	$2,592	$2,592	$2,592	$2,592	$2,592	$2,592
Bureau Repayment Appropriation	$57,883	$18,283	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000	$20,000
Total Reserves for Contingent Liabilities	**$57,883**	**$18,896**	**$20,612**	**$21,873**	**$22,593**	**$22,593**	**$22,593**	**$22,593**	**$22,593**	**$22,593**	**$22,593**	**$22,593**	**$22,593**
Total Appropriated to /(from) Reserves	**$101,484**	**$65,610**	**$45,738**	**$44,790**	**$49,613**	**$51,989**	**$54,895**	**$58,471**	**$60,045**	**$63,036**	**$61,224**	**$61,044**	**$60,648**

NORTH COUNTY (ZONE W-2) FINANCES

Water Charge Zone W-2, North County, accounts for approximately 80 percent of District water consumption, but because of higher water rates due to higher North County costs, over 95 percent of the Water Utility's revenue. As shown in Table 1-1, the Board adopted a $405/AF groundwater charge for non-agricultural (M&I) water and $40.50/AF for agricultural water for FY 2004–05.

Table 4-4 shows that total North County appropriations in FY 2004–05 are projected to increase by approximately $0.2 million from FY 2003–04, as increases in imported water costs are more than offset by reductions in operations costs and delays in capital improvement costs. The North County surplus of $0.7 million in FY 2004–05 augments District reserves.

Debt financing needs are projected to be $48 million in FY 2004–05 and funded by the District's $100 million commercial paper program. By the end of FY 2004–05, the District will have issued about $99 million worth of commercial paper.

FY 2004–05 capital improvement costs, while still substantial, are much less than they would have been without delaying Rinconada Stage 2 Water Treatment Improvement Projects and Lenihan Dam Outlet Modifications by one year. Delaying these projects allows the District to delay issuing a revenue bond from FY 2004–05 to FY 2005–06 and minimize debt service. The impact of these delays will be higher overall project costs due to inflation. In the case of Rinconada Stage 2 Water Treatment Improvement Projects, the delayed schedule will still meet the Environmental Protection Agency's (EPA) deadline for water quality regulatory compliance.

In response to the Governor's recent proposal to shift 40% of 1% property taxes away from enterprise funds in FY 2004–05 and FY 2005–06, the District has created a "State Impact – ERAF" reserve. The reserve sets aside $2.6 million to cover the potential property tax loss. If the Governor's proposal occurs and the reserve is used, it will worsen the cumulative revenue shortfall in South County in those years and may impact the rate projection in both the North and the South County.

TABLE 4-4
Overview of North County Finances

($ Millions)

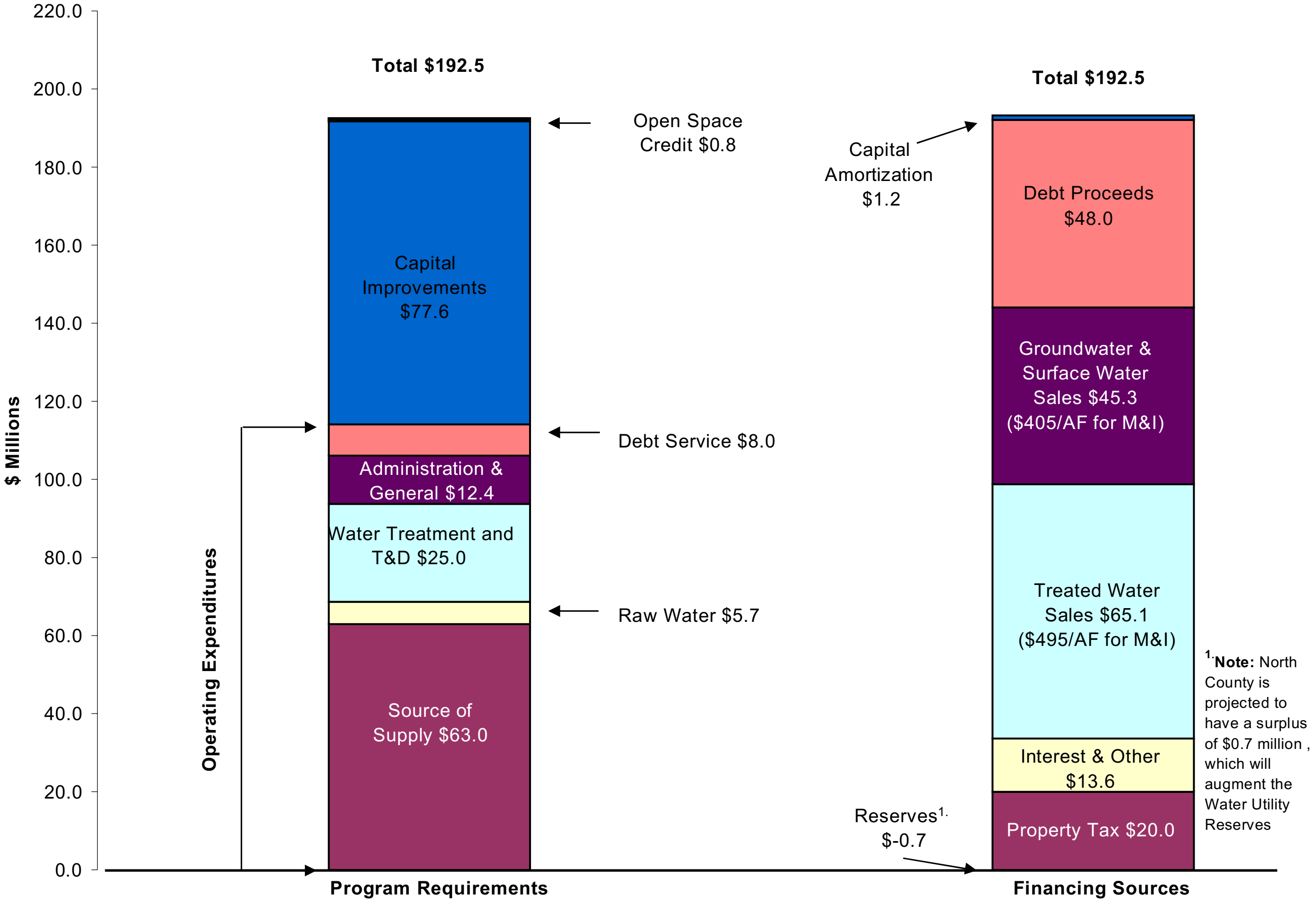
	Actual 2002–03	Adjusted 2003–04	Addendum Budget 2004–05
Allocated Revenue	$117.66	$129.63	$144.86
Revenue Bonds/ Other Debt Financing	**$6.03**	**$44.50**	**$48.00**
Less Open Space Credit to South AG	($0.53)	($0.65)	($0.79)
Capital Amortization from South Co.	$1.09	$1.21	$1.21
Capital Carryforward	$40.40		
Allocated Costs			
Operation	$81.11	$86.10	$80.83
Imported Water	$25.13	$24.64	$34.08
Capital Improvements	$91.50	$81.36	$77.64
Total Costs	**$197.74**	**$192.10**	**$192.55**
North County Surplus (Shortfall)	($33.09)	($17.41)	$0.73

The groundwater charges adopted by the Board for FY 2004–05 are necessary to conduct "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this state" (District Act, Section 26.3).

Figure 4-3 shows the relationship between expenditures and the projected sources of revenue in Zone W-2. The revenues from the groundwater rates are necessary to carry out the full scope of activities needed to achieve the Board of Director's Ends Policies on water supply and quality.

FIGURE 4-3
Fiscal Year 2004–05
North County Water Utility Program Requirements and Financing Sources

($Millions)



[1] **Note:** North County is projected to have a surplus of $0.7 million , which will augment the Water Utility Reserves

SOUTH COUNTY (ZONE W-5) FINANCES

Rates in the South County (Water Charge Zone W-5) are based on the costs of specific facilities, imported water costs, and operations costs related to managing the groundwater basin, ensuring water quality, and measuring water supplies and usage. Under current policies for managing the finances of South County, water rates are set to maintain an approximate balance between revenues and costs. The cumulative balance is tracked, and projected water charges are set to keep the cumulative balance near zero, while maintaining relative stability in South County water rates. Successive years of surplus or shortfall can occur, but rates are adjusted only when the trend in the cumulative surplus or shortfall shows a significant imbalance.

In January of 2004, staff met with the water retailers to discuss preliminary findings for the FY 2004–05 water rate analysis. The major point of discussion revolved around how to reduce the increasing imbalance between cumulative costs and revenues in South County. Water retailers suggested that the District increase rates significantly and that the South County should be charged interest on the cumulative revenue shortfall which is in effect a loan from Water Utility reserves. As a result of working with the water retailers, staff has incorporated interest charges into the financial model to be paid by the South County on funds effectively loaned by the Water Utility reserves.

In addition, the financial model assumes that Water Utility reserves will initially fund the District's perchlorate contamination response program for the South County. The timing and amount of reimbursement from the responsible party is unknown at this time.

For South County, the Board adopted a $200/AF groundwater charge for M&I water and $20/AF for agricultural water. With these adopted rates for FY 2004–05, costs are estimated to exceed revenues by approximately $1.5 million in FY 2004–05 (see Table 4-5) not including costs of the perchlorate response program. On a cumulative basis, costs are estimated to exceed revenues by $3.3 million at the end of FY 2004–05 not including the costs of the perchlorate response program.

Figure 4-4 shows the projected cumulative revenue shortfall under the recommended rate projection for South County. Under this rate projection, cumulative revenues and costs will be balanced by FY 2010–11. The rate projection assumes $40/AF increases in the M&I rate until FY 2008–09, at which point rate increase are scaled back as cumulative revenues and costs approach balance.

Increases in projected South County cost are driven by increases in the payments for imported CVP water as well as increases in the projected usage of CVP water to maintain water supply reliability in this fast-growing area of the County.

Current Board policy adds an "open space" credit to agricultural revenues. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural rates low. The credit to agricultural water users in a water charge zone amounts to the difference in revenue from agricultural water use charged at a rate equivalent to 10 percent of the zone's M&I rate and that which would be generated if the agricultural rate were 25 percent of the zone's M&I rate. A Board policy setting the agricultural water charge at one-tenth of the zone's M&I rate was instituted in July 1998 and formally incorporated into the pricing policy in Resolution No. 99-21 (see Appendix B). As shown in Table 4-5, the Open Space Credit received by the South County was $0.53 million in FY 2002–03, estimated at $0.65 million in FY 2003–04, and projected to be $0.79 million in FY 2004–05. As the M&I rates for both zones are projected to grow over the next ten years, the amount of the Open Space Credit available to support agricultural water revenues will continue to increase.

The groundwater charges adopted for FY 2004–05 in Zone W-5 are necessary to conduct "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this state" (District Act, Section 26.3).

Figure 4-5 shows the relationship between expenditures and projected sources of revenue in South County (Zone W-5) for FY 2004–05. The revenues from the groundwater rates are necessary to carry out the full scope of activities needed to achieve the Board of Director's Ends Policies on water supply and quality.

TABLE 4-5
Overview of South County Finances

($ Millions)

	Actual 2002–03	Adjusted 2003–04	Addendum Budget 2004-05
Allocated Revenue	$5.20	$6.45	$7.48
Received Open Space Credit from North County	$0.53	$0.65	$0.79
Allocated Costs			
Operation	$4.71	$6.37	$6.89
Imported Water	$0.92	$0.92	$1.58
Amortized Capital Improvements	$1.09	$1.21	$1.21
Interest due Utility Reserves			$0.08
Total Cost	**$6.72**	**$8.50**	**$9.76**
Surplus (Shortfall)	**($0.98)**	**($1.41)**	**($1.49)**
Cumulative Balance	($0.40)	($1.81)	($3.31)

FIGURE 4-4
South County Cumulative Revenue Shortfall Projection

($ Thousands)

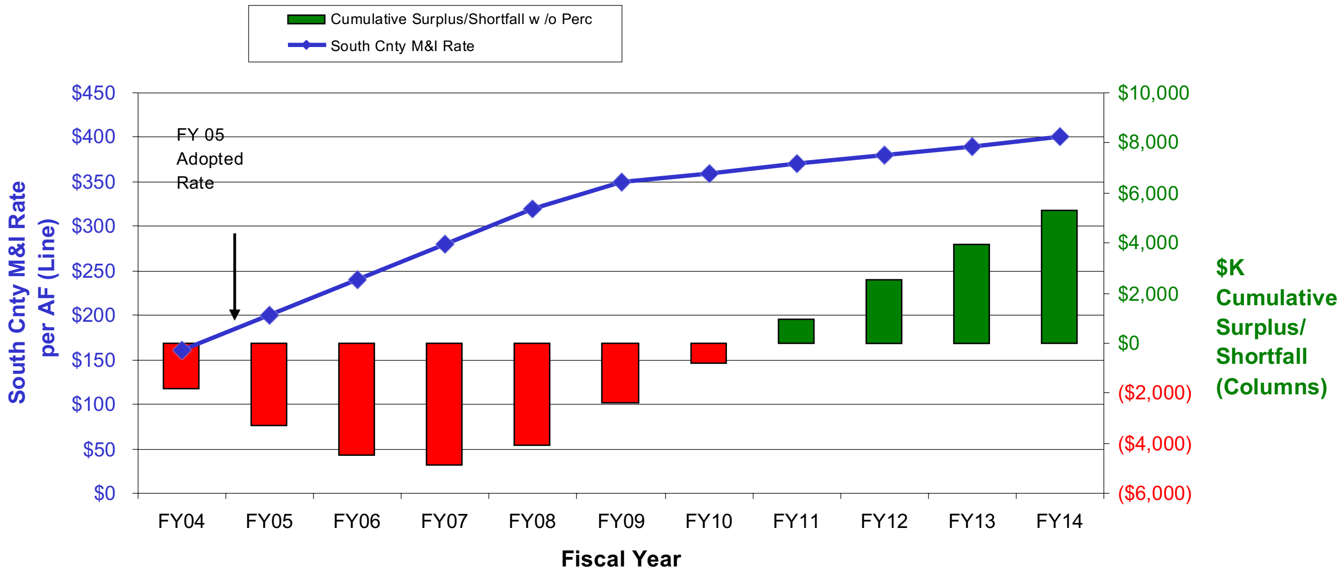
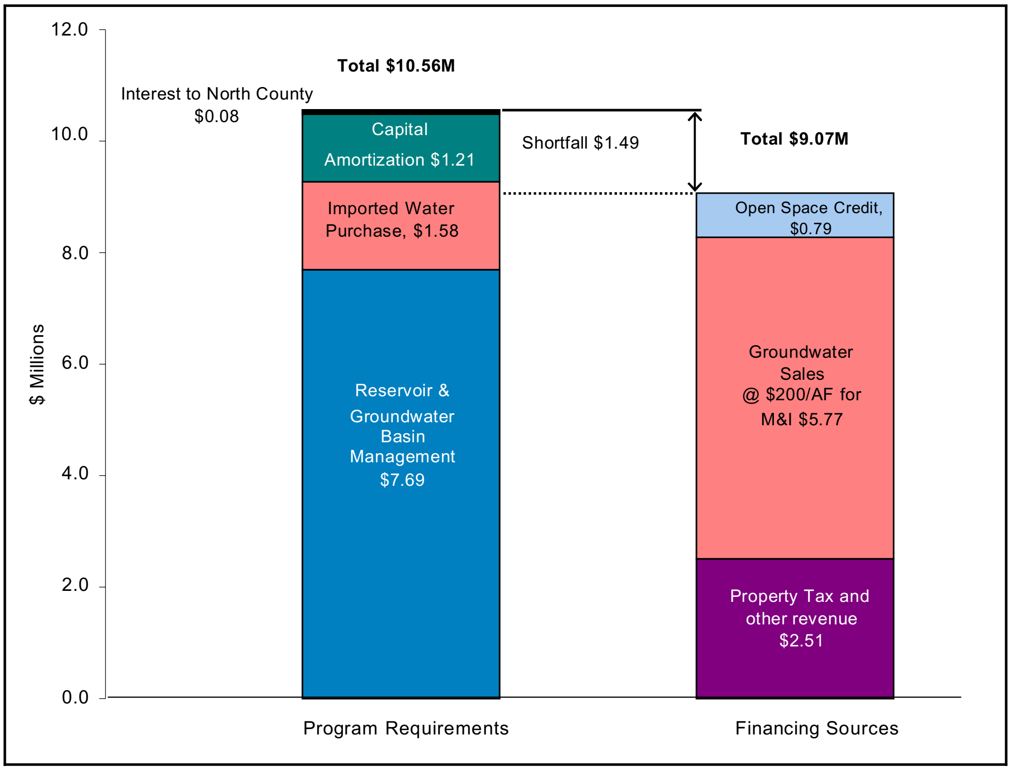


FIGURE 4-5
Fiscal Year 2004–05
South County Water Utility Program Requirements and Financing Sources

($ Millions)



Appendix A

WATER UTILITY RATE COMPONENTS AND ADOPTED RATES

TABLE A-1
Adopted Water Rate Components for Fiscal Year 2004–05

Component	Rate ($/AF)
Basic User, Zone W-2 (North County)	
Agricultural	40.50
M&I	405.00
Basic User, Zone W-5 (South County)	
Agricultural	20.00
M&I	200.00
Treated Water Surcharge	
Contract	90.00
Noncontract*	50.00
Water Master	11.75
Capital Cost Half Road Lateral System	2.75
Available Agricultural Discounts	
Mobile Lab	3.00
INAAP	3.00

***Note:** Treated water is provided in Zone W-2, the total charge adopted for contract treated water is the sum of $405 plus $90 or $495 per AF. Non-contract water will be available only from the Rinconada Water Treatment Plant in FY 2004–05, but non-contract deliveries will likely be limited during future construction periods.

TABLE A-2
Adopted Water Charges for Fiscal Year 2004–05

Type of Charge	AG Water ($/AF)	M&I Water ($/AF)
Groundwater		
Zone W-2	$40.50	$405.00
Zone W2 with Mobile Lab & INAAP Discounts	$34.50	N/A
Zone W-5	$20.00	$200.00
Zone W5 with Mobile Lab & INAAP Discounts	$14.00	N/A
Surface Water[1]		
Half Road Deliveries[2]	$34.50	$214.50
Other Zone W-5 Deliveries[3]	$31.75	$211.75
Other Zone W-2 Deliveries[4]	$52.25	$416.75
Minimum Charge Zone W-5[5]	$150.00	$150.00
Minimum Charge Zone W-2[6]	$303.75	$303.75
Stored Water		
Zone W-2	$40.50	$405.00
Zone W-5	$20.00	$200.00
Treated Water		
Contract[7]	N/A	$495.00
Noncontract[8]	N/A	$455.00
Recycled Water		
Gilroy	$31.00	$125.00

[1] Surface water charge is the sum of the basic user charge plus the water master charge. It also includes the capital cost and power, wherever applicable.
[2] Half Road = Basic User (AG or M&I @ $20.00 or $200.00) + Water Master ($11.75) + Capital ($2.75).
[3] Other Zone W-5 Deliveries = Basic User (AG or M&I @ $20.00 or $200.00) + Water Master ($11.75).
[4] Other Zone W-2 Deliveries = Basic User (AG or M&I @ $40.50 or $405.00) + Water Master ($11.75).
[5] Minimum Charge W-5 = 0.75 X Basic User W-5 (M&I @ $200.00).
[6] Minimum Charge W-2 = 0.75 X Basic User W-2 (M&I @ $405.00).
[7] Treated Water Charge is the sum of Basic User ($405.00) and Treated Water Surcharge ($90.00/AF).
[8] Treated Water charge for noncontract deliveries is offered to all treated water contractors in the Rinconada Water Treatment Plant service area for deliveries from that facility. The charge for non-contract deliveries is the sum of the basic user charge ($405.00) and the treated water surcharge for non-contract water ($50.00/AF).

Appendix B

DESCRIPTION OF WATER UTILITY REVENUE SOURCES, COST CENTERS, AND RESERVES

PRICING POLICY

The District's Board adopted Resolution No. 99-21 updating the Water Utility taxing and pricing policy in March 1999. This pricing policy incorporates four concepts: (1) water pooling, (2) water facilities cost pooling, (3) water resources management, and (4) revenue pooling. The complete policy follows after page B-4. The principal update to the policy in March 1999 was the Board's setting the agricultural water rate at 10 percent of the M&I rate in both Zones W-2 and W-5. Resolution No. 99-21 is included in this appendix.

WATER CHARGES

- Water charges include a **groundwater charge**, which is equivalent to the **basic user charge**, and is associated with the benefit of groundwater supplies. The groundwater charge is tax applied to water extracted from the groundwater basin in Zones W-2 and W-5, as shown in Appendix C. The basic user charge is applied to other types of water delivered by the District. There are two rates: one for agricultural water and one for M&I water.

- A **treated water surcharge**, which is associated with the benefit of receiving treated water, is levied in addition to the basic user charge on water delivered from the District's water treatment plants.

PROPERTY TAXES

Ad valorem taxes provide revenue to support several benefits which are general in nature serving all or large areas of the County. Some of these benefits are the availability of imported water to the County, recreation associated with the District's reservoirs, and replenishment of the County's groundwater subbasins.

The District receives a portion of the 1 percent countywide tax revenues as allocated by the County Assessor. Tax Zones W-3 and W-4, as well as a countywide ad valorem tax, are part of the 1 percent allocation.

The District also levies additional ad valorem taxes under Article XIII A of the State Constitution to meet: (a) prior approved general obligation bond debt service in Zone W-1 (zones are shown on the map in Appendix C) and (b) part of the contractual obligations for State Water Project State of California water with a countywide tax.

DEBT FINANCING

To fund the construction of new facilities, the District has historically relied on both pay-as-you-go financing and long-term debt financing from revenue bonds as authorized by the voters in 1977. The last remaining 1977 authorized revenue bonds were sold in April 1984. In January 1984, State Legislation allowed the District to seek authorization to issue revenue bonds as needed following the Board's approval. County voters approved this authorization in November 1984. The District sold an additional $30 million of revenue bonds in November 1985 to provide needed funding for ongoing projects. In August 1986, the District refunded all outstanding water revenue bonds. Again, in June 1994, the District took advantage of favorable market conditions to refund the remaining 1986 water revenue bonds. The 1994 refunding totaled $65.9 million at an effective interest rate of 5.2 percent. In December 2000, the District issued tax-exempt and taxable bonds in the amount totaling $60.3 million. In January 2003, the District decided to take advantage of the lower interest rates offered through short-term debt and entered into a $100 million commercial paper program.

WATER UTILITY RESERVES

There are thirteen reserves designated in the Water Utility Enterprise Fund. Policies and procedures for fund balance reserves, as approved by the District Board of Directors in 2001 can be found on page B-6.

WATER UTILITY ZONES

The major sources of water revenue are from charges levied on all groundwater extracted within Zone W-2 and Zone W-5 of the District and from the sale of approximately 110,000 AF of treated water. Other water charges are made for surface water diversions and sales of recycled water in the Gilroy area. A brief description of each water zone (see Water Utility Zones map in Appendix C) within the Water Utility Enterprise follows:

> **Zone W-1**: Encompasses the groundwater basin in the northern County and small peripheral areas outside the groundwater basin, with the retail service areas of privately-owned public utilities and municipal water departments using water pumped from the groundwater basin. This area provides the security for general obligation bonds. Zone W-1 comprises an area of approximately 290 square miles and includes all or portions of 13 of the County's 15 cities, plus some unincorporated territory.
>
> **Zone W-2**: Encompasses the Santa Clara Valley groundwater basin north of Metcalf Road. It includes those groundwater producing facilities that benefit from recharge of the basin with local and imported water. A charge is levied for all groundwater extracted from this zone.
>
> **Zone W-3**: Encompasses the Coyote and Llagas groundwater basins in the area from Metcalf Road in the north to just south of the City of Morgan Hill. Part of the County property tax within the 1 percent limit is allocated to this zone.
>
> **Zone W-4**: Contains all of Zone W-2 and lands outside Zone W-2 that use or otherwise benefit from locally conserved water and from the importation and distribution of water from the South Bay Aqueduct. This area also receives an allocation of County taxes. These tax revenues are used to pay for the cost of water, recovery of accumulated overdrafts, control of land surface subsidence, and to sustain the emergency supply of water.
>
> **Zone W-5**: Is comprised of the entire groundwater basin from Metcalf Road south to the Pajaro River. Charges are levied for all groundwater extracted from this zone.
>
> **Zone W-6**: Represents the old Gavilan Water Conservation District and is within Zone W-5.

WATER UTILITY COST CENTERS

Source of Supply Cost Center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply and includes all District conservation, recycling, and importation costs.

Raw Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.

Water Treatment Cost Center contains all expenditures associated with the treatment of water at the Rinconada Water Treatment Plant, Penitencia Water Treatment Plant, and Santa Teresa Water Treatment Plant.

Treated Water Transmission and Distribution Cost Center contains all expenditures relating to the distribution of treated water to water utilities and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts.

Administration and General Cost Center contains all expenditures of an administrative nature, which are not assigned to one of the other four cost centers. Work performed in this cost center covers items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water quality management and resource planning.

Appendix B

RESOLUTION 99-21

RESOLUTION NO. 99- 21

ADOPTING "WATER UTILITY TAXING AND PRICING POLICY" AND RESCINDING RESOLUTION NO. 96-82

WHEREAS, the Santa Clara Valley Water District (District) adopted a District mission, goals and objectives on February 19, 1985, in order to conduct a sound water management program that serves the community; and

WHEREAS, the District Act authorizes the District to enter into water sales contracts and to levy and collect taxes and assessments on property within the District and in the respective zones of the District and sets forth requirements for groundwater charges and rates between agricultural and nonagricultural water; and

WHEREAS, several Board resolutions, as identified in Exhibit "A," are related to the management of water resources and the implementation of this water taxing and pricing policy; and

WHEREAS, several changes which affect revenue sources and benefit distribution have occurred since adoption of Resolution No. 96-82. These changes include: (1) passage of Resolution Nos. 98-44 and 98-45 setting agricultural charges for groundwater and surface water at 10 percent of the nonagricultural charges; (2) revisions to the policy governing sale of noncontract water in 1998; (3) pending completion of an agreement to act as the wholesaler to deliver recycled water in South County.

BE IT RESOLVED, by the Board of Directors of the District as follows:

1. **The policy of the District in the areas of taxation and water pricing for water utility revenues shall be and is hereby adopted:**

    Policy Statement

    The intent of this water utility taxing and pricing policy is to provide revenue for the management of water resources and operation of the water utility enterprise. This policy establishes a framework for establishing a system of water charges as permitted by the District Act to meet revenue requirements and to allocate costs amongst the beneficiaries. The general approach is to charge the recipients of the various benefits for the benefits received from the District's comprehensive water utility program.

    The consumptive and nonconsumptive benefits provided by District water supply facilities and operations are listed and described below:

    - Provision of a water supply and effective management of water resources available to the community from a variety of sources of supply, transmission, and water treatment facilities operated by the District.
    - Protection of water quality through the purification and treatment of water and the protection of water supplies.
    - Stewardship of watersheds and riparian corridor.
    - Administration of related programs and projects such as recycled water and water conservation administered solely by the District or in partnership with another organization.

- Ancillary flood protection.
- Recreation, such as fishing, boating, picnicking, hiking, and other related recreation activities.
- Support for the economic well being of the community.
- Protection of the community infrastructure from subsidence.

2. Policy Implementation

The following water taxing and pricing concepts and framework shall be implemented in order to provide for revenue in order to continue providing direct and ancillary benefits to the customers of the District and the community of Santa Clara County.

Water Taxing and Pricing Concepts

- ***Water Pooling***: Water is considered to be a single commodity irrespective of the water's source or cost. It is a single commodity whether it is from water provided locally, imported, or recycled, and all users benefit from the availability of multiple sources of water.
- ***Water Facilities Cost Pooling***: All water supply facilities contribute to the common benefit of effective water resources management. In general, the water charges and property taxes are based on the common benefits of the capital and operations outlays, rather than reference to named facilities, with the exception of the liability for bonded indebtedness which is applied to each zone of benefit.
- ***Water Resources Management***: Water supplies are managed, through taxing and pricing, to obtain the effective utilization of the water resources of the District to the advantage of the present and future populations of the County. This concept provides for development of taxing and pricing structures that will achieve the effective use of available resources and conserve supplies for potential drought conditions.
- ***Revenue Pooling***: For the most part, water utility revenues are collected in a common fund and not designated for a specific cost. Such revenues are available for the general capital and operating outlays of the water utility enterprise. Some revenues such as certain property taxes are specifically designated for debt service and the fixed costs of the State Water Project, and are not available to the common fund. Water charges are established to provide the revenues that are required in the common fund for general capital and operating outlays and that are over and above revenues from ad valorem taxes, interest, and miscellaneous sources. This provides flexibility in managing continuing operations and funding capital outlays.

Water Taxing and Pricing Framework

The following procedures are intended as a general framework to guide staff in the development of a water rate structure implementing this policy:

- ***Zones of Benefit***: Zones of benefit are to be identified and established in accordance with the District Act. Groundwater charges and property taxes are levied for the benefits received by the water users and property owners benefitting from that zone. For each zone, a basic water user charge is determined for current groundwater and raw surface water users to be applied to the quantities of water used or consumed.

- ***Basic Water Charge Zones***: The objective of establishing various water charge zones is to recover costs for the benefits resulting from conservation, import, and recharge of water which occur only within that zone. Water charges are levied for water producing operations, such as groundwater pumping and raw surface water diversion. In addition, users may be subject to specific charges that meet special needs of a group of users, such as water master charges for surface water deliveries, a capital charge for equipment or facilities, and power costs for pumping.

- ***Treated Water Surcharge***: A treated water surcharge shall be added to the basic water charge for the price of treated surface water delivered by the District. The charge is to be established at an amount that would promote the effective use of available water resources. The charge may differ between treatment plants to better manage regional variations in groundwater conditions.

- ***Costs for Specific Benefits***: Whenever costs associated with specific benefits are clearly and easily measurable, those costs shall be charged to the beneficiaries, in accordance with their specific zones of benefit. Where there is a question as to the identity of the beneficiary or the method of measuring the benefit, the allocation of costs should remain flexible and be determined in accordance with accepted practices and sound judgements based on the four water pricing concepts. The District recognizes and supports the State Legislature's limitation imposed on the District that rates for agricultural water shall not exceed one-fourth of the rate for all water other than agricultural water. In order to encourage the continuance of agricultural use of land in the County, to encourage the preservation of open space, to defer intensification of users and to further support the limitation imposed by the State Legislature, it is the District's policy that rates for agricultural water shall not exceed one-tenth the rate for all water other than agricultural water.

  Both water charges and property taxes are used to recover costs incurred for the benefit of current water users. The costs for future supply sources can be recovered using current revenues or through project specific long-term financing.

- ***Balancing Costs***: The District recognizes that there may be imbalances between revenues and costs within a zone of benefit from year to year. The District will strive to achieve balance over the long-term in accordance with the District Act and to properly charge recipients for the benefits received.

- ***Incentives***: Incentives in the form of subsidies may be provided in order to reduce the price of specific sources of water in order to optimize use of available or future water resources.

- ***Recycled Water***: From time to time, the District may enter into agreements to provide wholesale delivery or other services related to recycled water. The District will strive to recover the costs of these facilities consistent with the pooling concepts outlined above, while adhering to the specifics of any agreement.

3. Executive and Staff Limitations

District staff are authorized to develop a water rate structure which meets the objectives set forth herein, in accordance with the District Act, and using the concepts set forth above. The District's rate structure is implemented only by resolutions approved by the Board of Directors.

Staff is authorized to recommend water charges for consideration by the Board in accordance with the District Act. Water charges, if any, shall be recommended by staff each year be at fixed and uniform rates for agricultural water and for all water other than agricultural water, respectively, except that each such rate for agricultural water shall be one-tenth of the rate for all water other than agricultural water. The Board has determined that agricultural use of lands is of value to the County and the state, and that agricultural lands provide an open space benefit. The Board's limiting staff to a recommendation of agricultural water rates below the maximum allowed by the District Act will benefit water users Countywide, and is necessary to carry out the policies of the State Legislature and the District Board of Directors.

Staff is authorized to prepare, for the Board's consideration, resolutions for the collection of property taxes as needed and authorized under applicable laws.

4. Previous Policy Rescinded

The "Water Taxing and Pricing Policy," adopted by Resolution No. 96-82, is hereby rescinded.

PASSED AND ADOPTED by the Board of Directors of Santa Clara Valley Water District on March 16, 1999 by the following vote:

AYES: Directors Gross, Zlotnick, Judge, Kamei, Sanchez, Estremera, Wilson

NOES: Directors None

ABSENT: Directors None

SANTA CLARA VALLEY WATER DISTRICT

By: ______________________
Chair/Board of Directors

ATTEST: LAUREN L. KELLER

Lauren L Keller
Clerk/Board of Directors

EXHIBIT "A"

SANTA CLARA VALLEY WATER DISTRICT BOARD RESOLUTIONS USED AS A BASIS FOR WATER TAXING AND PRICING POLICY

Resolution 68-4 to govern the management of its water supply and water facilities so as to equalize the availability of water throughout the District by every means available to it to the fullest extent consistent with equity and sound conservation principles; and

Resolution 71-19 adopting "Water Taxing and Pricing Policy;" and

Resolution 74-28 adopting rules and regulations for the service of surface water and establishing a fee and charge structure; and

Resolution 79-87 providing for water importation tax credits and repealing prior resolution which was adopted November 23, 1964.

Resolution 81-44 declaring policy regarding payment of in-county credit for ensuing fiscal years and that no unit rate is provided for the in-county credit and no payments made from and after fiscal year 1983-1984.

Resolution 90-73 adopting and authorizing the filing and implementation of the Santa Clara Valley Water District Urban Water Management Plan which provides for water conservation efforts which are funded by the District.

Appendix B

SANTA CLARA VALLEY WATER DISTRICT

POLICIES AND PROCEDURES
FINANCIAL SERVICES
FUND BALANCE RESERVES INDEX

Santa Clara Valley Water District
POLICIES AND PROCEDURES
Financial Services

FUND BALANCE RESERVES
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Santa Clara Valley Water District
POLICIES AND PROCEDURES
Financial Services

FUND BALANCE RESERVES

OVERVIEW

Introduction

The following Fund Reserves Policy is established in accordance with the Board's Executive Limitation, EL-1.4.3, "With respect to the actual, ongoing financial condition and activities, the CEO/GM shall not cause or allow the development of fiscal jeopardy or a material deviation of actual expenditures from Board priorities established in Ends policies." "Further, without limiting the scope of the foregoing by this enumeration, he or she shall not use any unappropriated long-term reserves or undesignated fund balance."

Based on the CEO's interpretation of the above policy, District Fund Balance Reserve policies and procedures have been developed and outlined herein.

The objective of this policy is to ensure the provision of adequate reserves and to provide guidance for the appropriate accumulation and use of District Reserve Funds. In addition to this policy, both long-term goals and short-term objectives will influence and direct the allocation of annual operating funds for the various reserves. The District classifies reserves as either Operating, Capital, Debt Service, or Funded and Contingent Liabilities.

Purpose

Fund Reserves represent a portion of fund balance that is segregated for a specific future use, or is not available for appropriation or expenditure. Adequate reserve levels are a necessary component of the District's overall financial management strategy and a key factor in external agencies' measurement of the District's financial strength.

This policy establishes the purpose and use of such reserve funds, as well as the procedures for funding and maintaining reserves.

General Policies

- Each budget year, the District shall establish reserve appropriations necessary to meet its legal covenants, set aside cash to pay expenses prior to the receipt of tax revenues, provide for prudent funding of operating contingencies and contingent liabilities, and sustain its capital improvement program.
- There are four categories of reserves: Operating, Capital, Debt Service, and Funded and Contingent Liabilities.
- Reserves are to be fully funded each budget year, or staff will establish an intermediate and long-term funding plan for the reserve as part of the budget process.
- Reserve funds will not be spent for any function other than the specific purpose of the reserve from which they are drawn, without explicit Board approval for the exception. All appropriations from reserve accounts require Board-approval.
- Debt Service Reserves are administered by debt trustees and set at levels established by loan covenants.
- All remaining reserves shall be reviewed each year by staff to determine reserve level requirement recommendations within guidelines established by this interpretation of Board policy.

OPERATING RESERVES

Contingency Appropriations

The fund balance reserves designated for operating contingencies are established at a fixed amount at the beginning of each fiscal year to provide for unforeseen needs, revenue shortfalls, and emergency appropriations during the year.

Fund	Fund Reserve Levels
Water Enterprise Fund	1% of Budgeted Operating Outlays
District General Fund	.5% of Budgeted Operating Outlays
Other Funds • Lower Peninsula Watershed • West Valley Watershed • Guadalupe Watershed • Coyote Watershed • Uvas/Llagas Watershed • Clean Safe Creeks Fund • Watershed & Stream Stewardship • Equipment Service Fund • Risk Insurance Funds	1.3% of Budgeted Operating Outlays per Each Fund.

Working Capital Reserves

The Working Capital Reserve provides for available cash assets from which operating and capital expenditures are temporarily financed prior to the receipts of revenues for the fiscal year.

Fund	Fund Reserve Levels
Water Enterprise Fund	One month (1/12) of budgeted operating outlays
District General Fund**	1/2 of estimated property tax revenues
General Fund sub-fund ** • Watershed & Stream Stewardship Fund **Watershed Funds** • Lower Peninsula Watershed • West Valley Watershed • Guadalupe Watershed • Coyote Watershed • Uvas/Llagas Watershed • Clean Safe Creeks Fund	1/2 of budgeted operating outlays

* This *Working Capital* operating reserve fund is required under the Water Utility System Master Resolution (Resolution No. 94-58 and the Second Supplemental Resolution No. 2000-64.)

** The Watershed and Stream Stewardship Fund is a subfund of the General Fund, however the Working Capital Reserves for this fund will be maintained in accordance with Watershed Fund requirements due to its related nature and purpose.

Performance Efficiency and Accountability Program Reserves

The Performance Efficiency and Accountability Program (PEAP) reserves provide funding for pilot or special one-time projects, studies, or activities.

The PEAP Reserves are funded by the remaining balance of revenues and expenditures appropriated to restore other reserves and contingencies to their authorized amounts at year-end. The reserve level should not exceed 10% of the prior year's operating expenditures excluding debt service.

Reserved for Encumbrances

Outstanding encumbered purchases, contracts, and other commitments for which the District bears an obligation are recorded as liabilities. These reservation of Fund Balance and Fund Equity represent funds set aside to ensure payment of the District's liabilities. The reserve's balances are adjusted annually to reflect total obligations at year-end.

Water Enterprise Operating Reserves

The following reserves have been established at contractual or recommended levels appropriate to the specific purpose of each reserve:

Reserve	Purpose	Fund Reserve Levels
Supplemental Water Supply Appropriation	Provides funding for supplemental water purchases, participation in water banking or conservation opportunities, and other water supply needs.	Not to exceed $11 million which represents the highest annual amount expended for supplemental water supply needs.
Rate Stabilization Reserve	Reserve established to both 1) mitigate fluctuations in water rates by providing funding during periods of extraordinary operating expense or water revenue shortfalls, and 2) to supplement District revenues to meet debt service coverage requirements. Per bond covenants, transfers from the Rate Stabilization Reserve are to be used to pay operation and maintenance costs in order to offset extraordinary expenses and revenue shortfalls, and to supplement District revenues to meet Debt Service Coverage requirements, upon Board approval.	Budgeted reserve levels correlate to annual debt service. The reserve minimum is budgeted to not less than 10% of annual debt service due on all Parity Obligations. This amount may be transferred each year to the Water Enterprise Fund for purposes of calculating the net Water Utility System revenues needed to meet the rate covenant in the Water Utility System Master Resolution, as amended (Second Supplemental Resolution No. 2000-64).
San Felipe Appropriations	Contractually stipulated operating reserves established pursuant to the District's 1977 Agreement (No. A0315) and the 1986 Agreement (No. A0770) with the U.S. Bureau of Reclamation (USBR), for the operation and maintenance of the San Felipe Division of the Central Valley Project. Facility expenditures from the reserve appropriations are restricted to meeting unforeseen extraordinary costs.	The following minimum reserve levels are maintained for each of the three San Felipe Reaches, in accordance with the Bureau of Reclamation contract: • San Felipe Reach 1-$1,000,000* • San Felipe Reach 2-$ 500,000 • San Felipe Reach 3-$ 250,000 ** Reach 1 Reserve is jointly maintained with San Benito County Water District.* The maximum amount of this reserve should not exceed $10 million.
Environmental Water Banking Reserve	Established by Board action on February 6, 2001 to receive any revenues generated by the Agreement Between the Department of Water Resources of the State of California, Santa Clara Valley Water District and Kern County Water Agency for 2001 Water Resources for Support of the Environmental Water Account Under the CALFED Program. (Agreement #A2438W) and other funds which may in the future be allocated by the Board. This reserve provides a secure mechanism to make sure funds are available to meet financial obligations generated by the agreement and to offset future capital and operating expenses related to the District's water banking activities.	The reserve is funded by revenues and/or other funding sources received in excess of costs, to a maximum balance set by Board action of $15 million.

CAPITAL RESERVES

Fixed Asset Reserves

The purpose of this reserve is to accrue funding for asset purchases and replacement in the period of use. Through this funding reservation, monies are set aside for planned future asset expenditures within specified categories. In addition, this reserve provides a funding source for unanticipated asset needs, mitigates the impact of large budget expenditures, and assists with asset management and long-range planning.

Reserves are designated within three asset categories: Equipment, Vehicles, and Facilities. The Fixed Asset Reserves do not include reserves for dam and pipeline infrastructure or flood control improvements as these assets are generally funded through debt issues.

An amount equal to annual depreciation in each of the three fixed asset categories is designated to the asset reserves as Fund Balance or Fund Equity is available. Funding in excess of annual depreciation may also be accrued to make up for prior unmet reserve funding. Fixed Asset Reserve levels are not to exceed the total accumulated depreciation balance applicable to each asset category.

Use of this fund is restricted to appropriations for asset replacement and purchases as needed, under the adopted budget and through Board approved budget adjustments.

Designated for Current Authorized Projects

This reserve provides for the funding of remaining authorized capital appropriations as of the close of the fiscal year. Capital Projects operate on a multi-year basis; hence all amounts approved but unspent on currently active Capital Projects may carry forward (with the exclusion of unspent labor and benefits) in this reserve until the projects are complete.

Reserve balances are adjusted annually to reflect total obligations at year-end.

Designated for Future Years Capital

This reserve is provided within each District fund in support of future capital needs, as projected in the District's 5-year Capital Improvement Plan.

For the Clean, Safe Creeks Program Fund, the remainder of both operating and capital revenues not otherwise re-appropriated to restore the fund's operating reserves to their authorized amounts, are appropriated to this reserve for use in financing projects on a pay-as-you-go basis.

For all other funds, Future Years Capital Reserve balance is the accumulated remainder of revenues not otherwise re-appropriated to restore all capital reserves and contingencies to their authorized amounts.

DEBT SERVICE RESERVES

Debt Service Reserves

Debt Service Reserves are to provide a reservation of funds for current debt service payment on outstanding debt.

Reserves are established in accordance with Bond or Certificate of Participation (COP) resolutions and initially funded from proceeds of the issuance. Each Debt Service Reserve Fund is required to be maintained in accordance with resolution mandates.

Debt Service Reserves are held and administered by the issuance trustee, to be used for payment of the principal and interest in the event that on any payment date the fiscal agent does not receive sufficient installment payments from the District for such purpose.

FUNDED AND CONTINGENT LIABILITIES

Funded and Contingent Liabilities

These reserve funds are established at recommended levels appropriate to each reserve for the purpose of discharging a future contingent liability.

The contingency reserve funds defined below are ongoing contingency reserves.

Water Enterprise Contingent Liability	Purpose	Contingency Reserve Levels
U.S. Bureau of Reclamation: CVP Repayment Appropriation	Established by Board policy to provide funding for the District's possible future contractual liability to the U.S. Bureau of Reclamation for the Central Valley Project water rate increase obligations.	Reserve appropriation levels are established by authorized appropriations under the adopted budget. Amount is set based on the estimated deficit accrued from water purchase contract.

Risk Insurance Appropriations	Purpose	Contingency Reserve Levels
a. General Liability	Established by Board policy to fund the contingent liability for the District's self-insured portion of general liability and property damage claims. General Liability commercial insurance coverage is purchased for claims exceeding $2 million.	Reserve appropriation amounts are determined through an independent actuarial evaluation. Current reserve levels are established under a 95% confidence level, to include payment on both incurred but not paid and incurred but not reported claims.
b. Worker's Compensation	Established by Board policy to fund the contingent liability for the District's self-insured portion of worker's compensation claims. Workers' Compensation commercial insurance coverage is purchased for claims exceeding $250,000.	Reserve appropriation levels are determined through an independent actuarial evaluation. Current reserve levels are established under a 95% confidence level, to include payment on both incurred but not paid and incurred but not reported claims.
c. Catastrophic Loss	Established by Board policy to fund the District's self-insured contingent liabilities for non-insured claims.	Reserve appropriation levels are established by authorized appropriations under the adopted budget, with a target reserve level of $5 million dollars.

Appendix C

ACRONYMS AND MAPS

ACRONYMS

AF	Acre Feet
AG	Agricultural
BMP	Best Management Practices
CAA	Clean Air Act
CIP	Capital Improvement Plan
CVP	Central Valley Project
CVPIA	Central Valley Project Improvement Act
DSOD	Division of Safety of Dams (California)
DWR	Department of Water Resources
EPA	Environmental Protection Agency
EPM	Environmental Programs and Management
ET	Evapotranspiration
EWA	Environmental Water Account
FAHCE	Fisheries and Aquatic Habitat Collaborative Effort
FPEIR/S	Final Programmatic Environmental Impact Report/Statement
FY	Fiscal Year
HAZMAT	Hazardous Materials
HET	High Efficiency Toilet
INAAP	In-field Nutrient Assessment Assistance Program
ISMP	Information Systems Management Plan
IWRP	Integrated Water Resources Plan
LTA	Long-term average
LUSTOP	Leaking Underground Storage Tank Oversight Program
M&I	Municipal and Industrial
MTBE	Methyl Tert-Butyl Ether
MWD	Metropolitan Water District of Southern California
OPA	Office of Public Affairs
PCE	Perchloroethylene
PEAP	Performance Efficiency and Accountability Program
PWTP	Penitencia Water Treatment Plant
ROD	Record of Decision
RWQCB	Regional Water Quality Control Board
RWTP	Rinconada Water Treatment Plant
SCRWA	South County Regional Wastewater Authority
SCVURPPP	Santa Clara Valley Urban Runoff Pollution Prevention Program
SDWA	Safe Drinking Water Act
SFWD	San Francisco Water District
SFPUC	San Francisco Public Utility Commission
STAG	State and Tribal Assistance Grants
STWTP	Santa Teresa Water Treatment Plant
SWP	State Water Project
T&D	Transmission and Distribution
ULFT	Ultra-low-flush Toilets
UST	Underground Storage Tank
WET	Water Efficient Technologies
WTP	Water Treatment Plant

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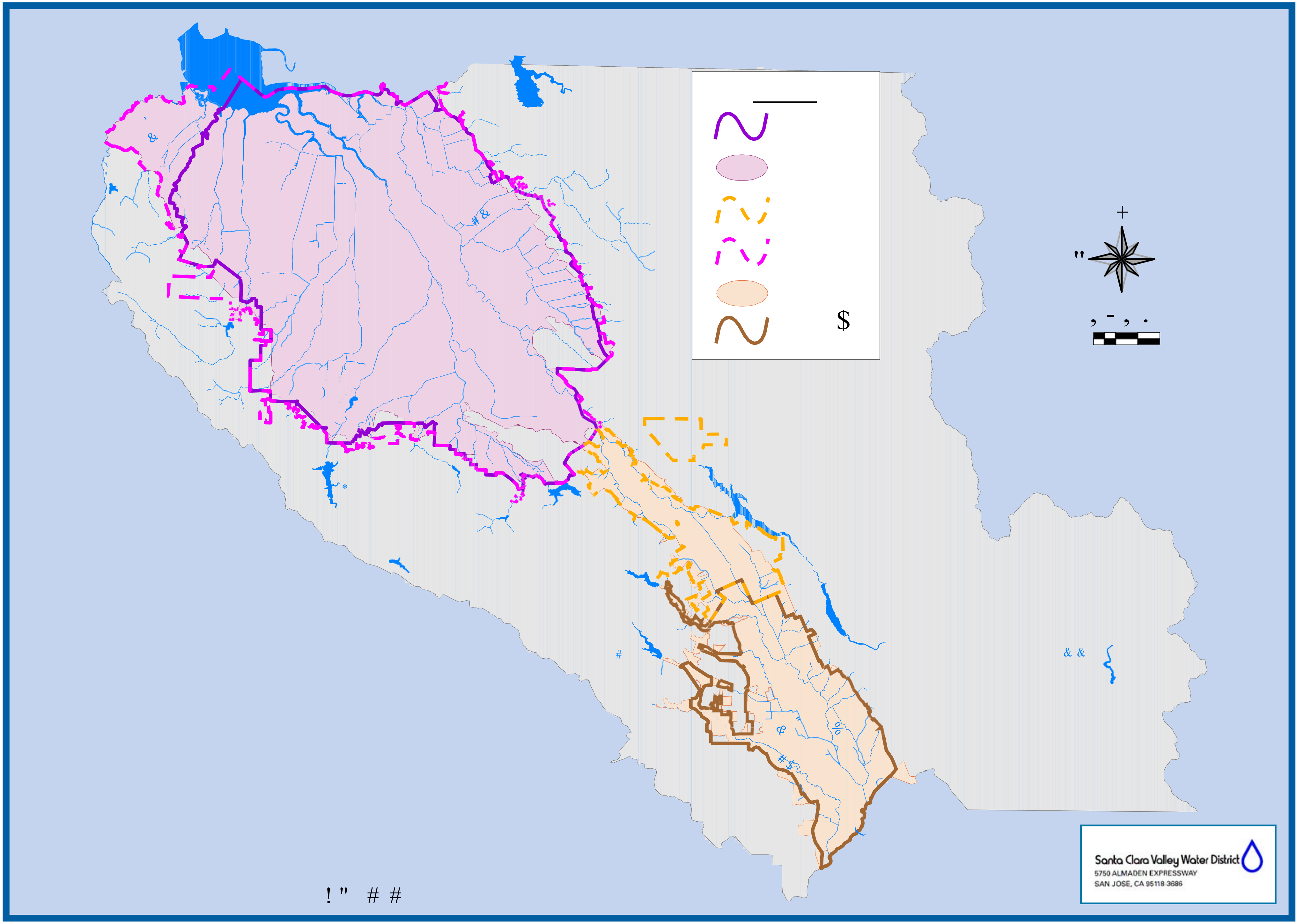
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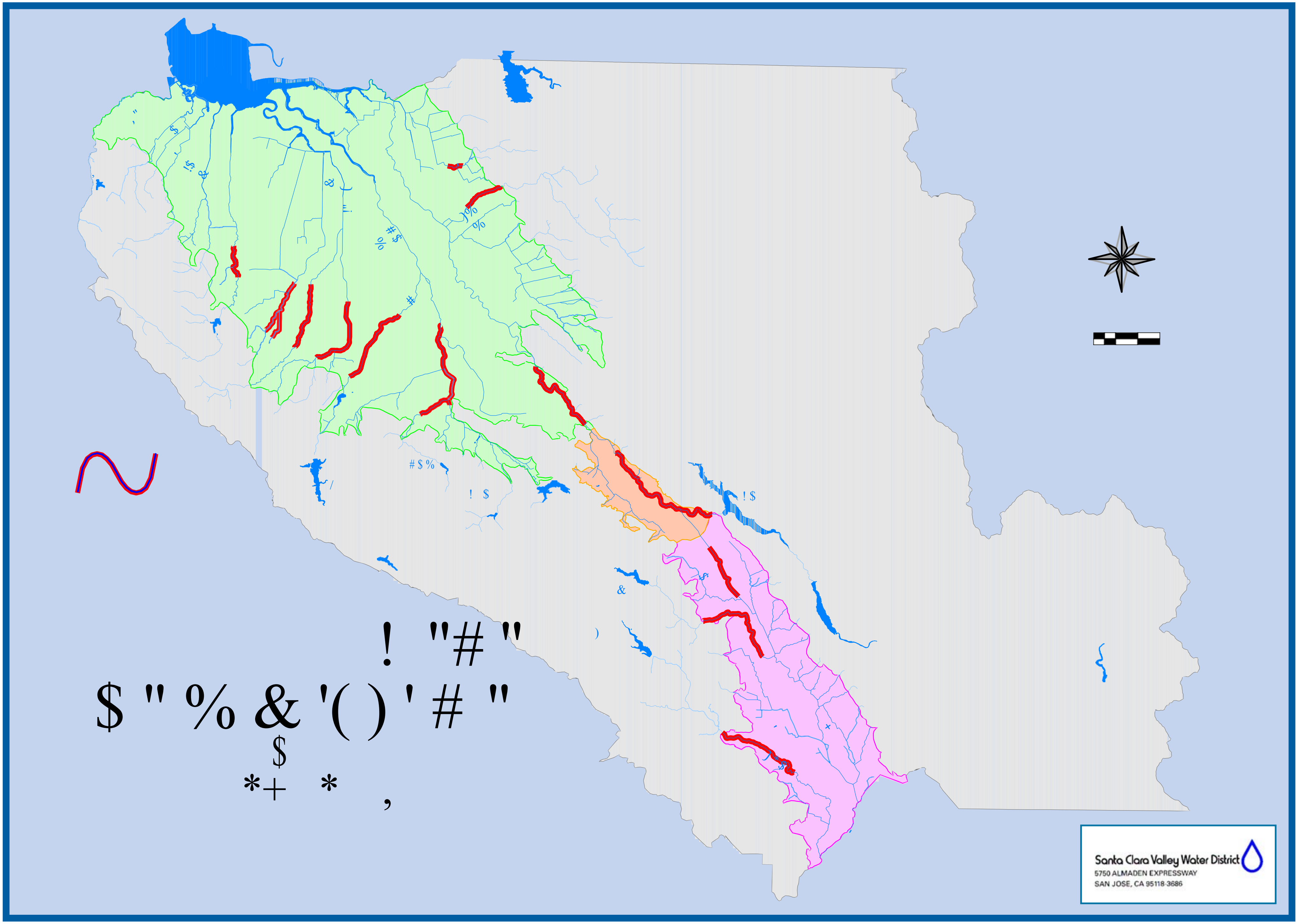
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